

To investigate and demonstrate through my sculptural practice
the relation between 'virtual' and 'real' sculpture.

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the degree of Doctor of Philosophy

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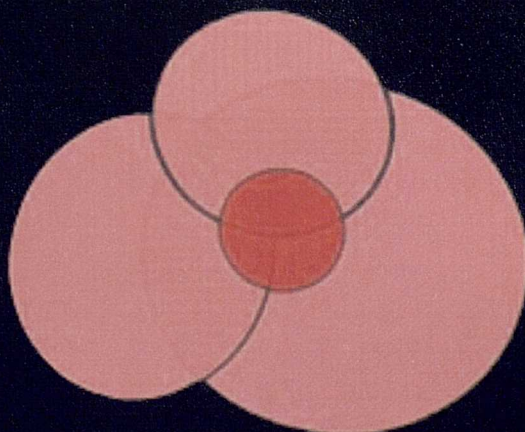
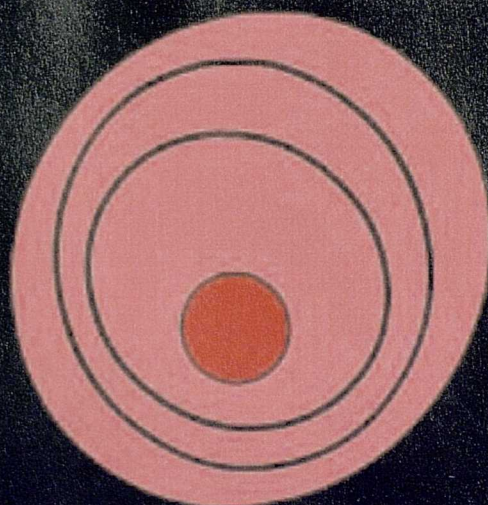
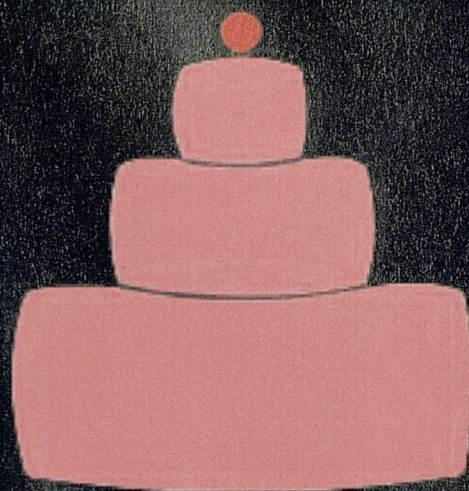
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Cakes and Calories: An Encounter with The Madeleine



Abstract

This thesis argues that digital technology has a significant role to play in the development of new sculptural/artistic practices that are distinct from Modernist practice in a number of ways. The key to this investigation has been my own practice, aiming to investigate in an open ended exploratory way the role digital media has to play in the development of a sculptural practice appropriate to and reflecting on Postmodern culture. An exploration of notions of the 'real' and the 'virtual' has been undertaken within a specific body of work, I describe these projects through five case studies.

Through this journey from project to project I identify areas of discomfort and contradiction as well as the implications for new skills with a new rationale for implementing them. Questions arise about the position of the object, of making, the idea of the art experience in its aesthetic (form and content) and anthropological dimensions (rituals of engaging with the artwork). Working through a series of problems, approaches, bringing different values and ways of handling the role and position of author/artist and of the work.

These differences are cross referenced with the experiences of five other practicing artists also involved in developing their practices within the same field of new media and who contribute different perspectives to the research aim.

This research is aimed at practitioners who wish to develop their practice and use new technologies as part of their sculptural/art practice. I hope the struggles I have documented in reflection of my own practice balanced with interviews from other practitioners dealing with similar issues will act as a springboard/foundation for others to develop their own practice.

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Introduction

This thesis argues that digital technology has a significant role to play in developing new sculptural/artistic practices that are distinct from modernist practices in a number of ways. Key to this investigation has been my own practice, an emergent exploration of notions of the 'real' and the 'virtual' within a specific body of work, documented in the thesis as Case Studies 1-5. These case studies reveal different values and ways of handling the role and position of the author/artist, the way in which artists work with a medium/material/tool, the nature of the artwork or outcome, and the way in which the audience interacts with the outcome. These differences are cross referenced with the experiences of five other practising artists also involved in developing their practices within the same field of new media and who contribute different perspectives to the research aim.

I began this research, attracted and inspired by the prospect of 'virtual sculpture' as a means through which to explore the Postmodern proliferation of images in our culture. The aim of this research is to inform my sculptural practice and through this provide insights for other practitioners rising to the challenge of developing their practice through the use of digital media.

Research Methods Used

On deciding upon the methodological framework for this research project it has been necessary to build my own research strategy - not following one particular format, but a combination of several, using the social sciences as a starting point. As the development of practice based research is still at a relatively early stage I found following examples of social science methodologies provided me with a structure to follow, subvert and ignore. I used these methodologies to discover and feel confident to articulate the methodologies that already exist in art practice such as reflection, critique, and response to change. I also developed my methodology from revisiting the ideas of artists' practice such as Marcel Duchamp who saw his practice as a process of research.

It has been integral to the research that the structure of enquiry should illuminate and inform my sculptural practice. But also my working methods as an artist influence the structure of this research. As a "Practitioner-Researcher" as described by Colin Robson (1993, p446) in *Real World Research*.¹ I use my practice as a sculptor to inform my theory, which in turn informs my practice. This cyclical pattern is recognised as "Action Research", a term first applied by Kurt Lewin in 1946. He designed a methodological structure that "involves a spiral of cycles of planning, acting, observing and reflecting" (Robson, 1993, p438). Lewin's model differs from traditional research methodology in being non-linear and in emphasising the study of action – observing the effects and exploring new possibilities (Marrow, 1969, cited in Sanford, 1981, p174).² This is at odds with traditional research methods which advocate the separation of science and practice, as noted by Neville Sanford in *A Model for Action Research* (Sanford, 1981, p173). He saw Action Research as an antidote to the majority of research, which

he maintained, confirms what is already known i.e.: it describes, explains and understands, while Action Research changes ideas and promotes creativity. Sanford is writing about scientific research methods, but his Action Research approach is well suited to other disciplines.

The model of Action Research has also influenced the format in which I wish to present this text. Because the idea of a cyclical approach to research has been an enabling structure for my practice based research, I would ideally wish this text would be presented in the form of a CD-Rom designed as hypertext. Unfortunately the regulations of the University will not allow the submission of a CD-Rom, although the text here is presented in a traditional linear format, each part could lead to, report on, or reflect on another. This thesis is organised in three strands: Chapters, contextual analysis and reflection; Interview Analysis, observations and discussions with other practitioners; and Case Studies, reports of my practical work throughout the project.

To investigate the appropriateness of computer software in sculptural practice I found it was necessary to examine the context of my own practice, exploring the contradictions between my Modernist training and my now Postmodern practice. Through my Modernist training I have explored each material used in my sculptural practice by experimenting with it, reducing it, exposing it. For example, using fibreglass resin, where I experimented with laying it direct on to an armature rather than laying it into a mould (fig.1). I allowed the fibreglass mat to show, to expose its skin-like qualities; the idea was to discover a sensation through the material, I allowed the material to show 'itself' and through the qualities of the material, found a vehicle for my ideas. When I used concrete (which I also applied over an armature rather than into a



fig. 1 Kate Allen, How Two Part, 1993. Fibreglass and resin, 200 x 70 x 50cms.

fig. 2 Kate Allen, Prod, 1989. Concrete and insulation foam, 210 x 260 x 70cms.

mould), I found the surface texture similar to the rough rasping sensation of a cat's tongue (fig. 2). This discovery through exploring the material was the catalyst for a whole series of sculptures. I want the material to be 'what it is', but also through my intervention open up alternatives.

Through this text and particularly in the case studies of my different sculptural projects, I document various attempts to apply a similar model of discovery to computer software. One of the main problems I have found in assembling a methodology is to include accounts of my sculptural practice as the subject of the case studies. I noted that in the structure for action research set out by Lewin (1949)³ the last of his cyclical spirals was titled "reflecting". The action of reflection is a main part of this research process. This led me to the work of Carolyn Ellis and Michael G. Flaherty editors of *Investigating Subjectivity: Research on Lived Experience*. In this text they set out to describe, as they put it, "new methodological techniques for examining emotional process" (1992, p4).⁴ Among the methods they describe are interviewing, participant observation, systematic introspection, performance, analysis of archival records and documents from mass media such as films, newspaper accounts, autobiographies, and novels. They discuss the idea of the researcher as "becoming the phenomenon and reflecting on their own streams of consciousness" (1992, p4).

I detail in the form of case studies the progress of five sculptural projects in which I put into practice some of my ideas attempting to work with the 'real' and the 'virtual' – the information coming from diary and sketchbook entries, my experiences of making, observation and comments from my peers and audience. These texts are entitled Case Study 1: Have Your Cake and Eat It which I describe as a liminal⁵ phase creating a series of installations/performance. Case Study 2: Safety Net was a commission by Jubilee Arts combining real and virtual objects in a public place, where I reflect upon some of the issues that arise from working collaboratively. Case Study 3: Exorcising the Flesh an account of an interactive installation for Walsall Museum and Art Gallery, where I attempt to turn calories into digital animations. Case Study 4: Visualisation for Andrew Sabin was a collaboration with another artist where the intention was to build a virtual model from the artist's verbal descriptions for his installation at the Henry Moore Institute in Halifax, and Case Study 5: Performance a continuing series of performances shown nationally, dealing with the idea of the creation of 'perfect' women.

I have carried out a field study as participant observer in real world setting, using unstructured interviews, analysis of work produced and case studies. As quoted in Robert Burgess's book *In the Field*, "the field researcher is a methodological pragmatist" (Burgess, 1984 p5).⁶ I have found it necessary to tailor my questions to fellow practitioners, rather than stick to a formulaic set of questions. I am interested in exploring artists' approaches to new technologies rather than finding comparisons between artists. I favoured a loose approach, where questions asked and data collected gradually directed me to an appropriate conceptual and theoretical framework. The collection of interviews are reported in the form of discussion topics and develop issues concerning the characteristics of computer technology, practical working methods, method of production, audience and interactivity, and digital arts acceptance within art practice. These points continue to be explored in both the practical and reflective areas of the project. The Interview Analysis chapters have been broken down

into five sections that emerged through reflection on the interviews and they are interspersed through the text. I have also added pertinent information and experience from my own practice in some sections.

The text Interview Analysis 1: Introduction to Computers details the introduction of the computer in each artist's practice and what characteristics the computer added to that practice. Interview Analysis 2: Merging Digital and Fine Art asks the interviewees to consider the place of digital art in the fine art world. Interview Analysis 3: Software v Programming discusses methods of making and practical methods of working the use of software and programming. Interview Analysis 4: Collaborating Creatively discusses working collaboratively to deal with the complexities of technology, and Interview Analysis 5: Interactivity considers the audience, ideas of interactivity changing the way artists work.

The gradual collection of information through case study, reflection, and action, links to the methodology of "Grounded Theory" (Glaser and Strauss, 1967)⁷ where theory is generated from data. I have attempted to ground my theories of the role of computer software created imagery in sculptural practice, through my experience as a sculptor creating installations and performances where I combined physical materials and digital images.

There are seven chapters that deal with a contextual analysis of the thesis, which could, as with all the texts, be referred to in any order.

In the text Chapter 1: Identifying the Medium, I begin the task of understanding the appropriateness of computer software in sculptural practice; a technique I had applied to other new media introduced into my practice. What had attracted other artists to use computers in their work? What was the identity, the essence of this media – was it a tool or a material? In identifying the use of the computer in art practice I also looked at how earlier technologies, such as photography, influenced representation and image.

Chapter 2: Flattening Reality explores the influence of the Image and Mass Media on our sense of 'reality', with reference to Jean Baudrillard's ideas of simulation and considers what it is to live within a "depthless"⁸ culture.

In Chapter 3: Does the Software Determine the Work? I address the arguments for and against using software and programming, also what sort of identity or aesthetic generic software brings to the work.

Chapter 4: Problems of Presentation reflects on the ideas of working with both virtual and real objects. I also explore interactivity and how the audience views the work – particularly through my experience of creating work in galleries and the idea of the computer as an alternative representation.

Chapter 5: Software as Ready-made considers the idea that software could be regarded as a Postmodern type of 'Ready-made' with which comment can be made about our image-based society; a cultural tool that functions as a result of loss of "aura" (Benjamin, 1935).

Chapter 6: Between Modernism and Postmodernism explores the contradictions I experienced working with Modernist desires in a Postmodern practice. Searching for depth and mystery with an image-based medium in the expanding field of "Sculpture" (Krauss, 1979), I consider the shift of meaning away from the object, which evolved

into the dematerialisation of the object in Postmodernism. I imagine the opposite, that an object could be 'materialised' through computer image simulation.

Chapter 7: Omnipotence deals with the desire for the unknown in a digital world and how through the use of VRML (Virtual Reality Modelling Language) I found a method of creating this, a model that could contain unknown areas.

The methodological structure I have laid out is multidisciplined and fluid, in order to "accommodate a situation at once fluid, plural, uncentred, and ineradicably untidy." (Geertz, 1993, p21).⁹

The methods used in this research reflect the multi-dimensional aspect that a Postmodern sculptural practice may follow, which I propose as fundamental to the inclusion and acceptance of the computer into sculptural practice. Through this research methodology I hope to explore the effects that the application of software has had upon my sculptural practice, and also to reflect upon the practice of making sculpture, by setting this practice into a theoretical framework.

Chapter 1:

Identifying the Medium

Within the tradition of twentieth-century sculpture, which utilises an eclectic mix of media, the appropriation of digital technologies for artistic expression and production raises a number of issues. What relevance can a medium which results in work inherently unstable and intangible be to the object-orientated art world, and particularly to the practice of object-making/sculpture? In *Computers & Art* (1997, p13) John Lansdown discusses the concept of “appropriateness”. In this essay he describes the uncertainty that occurs in the development of a new media. Until that media reaches a level of maturity where it can be recognised for its own unique characteristics, there is a tendency to use it to imitate previous media. He cites photography (where photographers regarded themselves as painters with light rather than paint) as an example of this tendency within a previous technology.

In order to understand the appropriateness of using computers in sculptural practice it is necessary to consider means and mediums within the history of representation briefly.

Representation

Linear perspective was developed in the fifteenth-century in Renaissance Florence. Linear perspective set out rules to allow the recording of three dimensions on a two dimensional plane. This required a single fixed viewing point and the depiction of objects in the scene in accordance with the angle they join at that viewing point,¹⁰ thus creating the illusion of depth or distance. Cameras are designed to produce pictures that are in central perspective; the photographic process, which produces the image, is the result of a chemical recording or trace of light. A computer image is not phenomenological; it is a mathematical simulation of reality; the computer provides a digital representation of the laws that govern linear perception.

As new imaging technologies are developed they frequently draw on, and refer to, the established technologies and media that precede them. The set up of the scene in a 3D modelling package such as 3D Studio is based on the rules of perspective developed in fifteenth-century Florence. 3D Studio describes the axis as an invisible line, along which geometry is moved, scaled or rotated. The three axes (X, Y, Z) representing width, height, and depth create the scene in the 3D editor. Software programs such as Photoshop and CorelDRAW have been designed with filters to imitate many types of paint, graphic and printmaking techniques. In part, these deliberate associations are used to establish an authority for the new imaging technology by connecting them with respected media. But they also highlight the influence of existing media over the design of new media. As with the camera, the computer will gradually escape from the past gaining its own identity. Lansdown mentions the first photographers who saw themselves as “painters with light”, rather than with oils and watercolours. Fox Talbot

called the camera the “pencil of nature”. (As noted by Susan Sontag in *On Photography*; the photographer was considered as, “an acute but non-interfering observer – scribe, not a poet.”)¹¹ (Sontag, 1979, p88)

The idea that the camera passively records whatever it is pointed at has changed since Fox Talbot; the camera is not ‘objective’, but controlled by the viewpoint from which the picture is taken and the orientation in which the picture is presented, leading to different interpretations of the photograph. Photography has gradually become accepted within art practice as a medium in its own right, with its own conceptual framework, having had a major influence on art practice. From Duchamp’s painting *Nude Descending a Staircase* inspired by the photographic studies of motion by Marey or Muybridge, to the winner of the Turner Prize 2000, Wolfgang Tillmans.

The camera captured the previously unseen motion of movement that inspired Duchamp, and new technology is allowing artists to create ideas that could not be achieved before that technology.

The artist Frank Stella is an example of this: with the help of two assistants he has used computers to capture the complex structures of smoke rings and produce them as paintings and sculptures. Stella’s work is the representation of a single moment from a continuous flow, stopped by a photographic process and entered into the computer which could calculate and simulate the form of a smoke ring, and thus an intangible phenomenon is captured and cast in aluminium or painted (fig. 3).



fig. 3 Frank Stella, Easel Paintings, 1999. Cast aluminium and steel. Smoke ring sculptures in situ at an exhibition for Bernard Jacobson Gallery, 14a Clifford Street, London.

Orlan

Artist Orlan has used digital imagery and plastic surgery to manipulate her body. She was inspired to use technology to achieve this through the thought that, with the technology we have, it is possible to bring the internal image closer to the external image. She began by devising self-portraits using a computer to combine and make a hybrid of representations of goddesses from Greek mythology. Once she had created the computer image she underwent at least nine operations, the first in 1990¹² to make her look as much like the computer image as possible (fig. 4). She was the first artist to use cosmetic surgery as part of her work she called it “carnal art”. Her slogan is “this is my body, this is my software” – a slogan which she took literally.

Artists have always been inspired to use the latest technology, and in order to identify digital media’s appropriateness to art practice I explore what first attracted some artists to use a computer in their work.



*fig. 4 Orlan, Image from her website
(www.cicv.fr/creation_artistique/online/orlan/),
sitting in front of digitally manipulated self portraits.*

Interview Analysis 1: Introduction to Computers

I wanted to discover why each interviewee started using the computer in their practice, what they had identified as being useful to them, and their individual methods of integrating computers into their practice. Also, discussing how their practice has changed as a result of using the computer, which I felt a fundamental question in exploring the relationship between the 'virtual' and 'real' in sculptural practice.

Each had a unique reason for using computers, but I noticed a common factor was a desire for control. In the fifteenth-century, Renaissance artists had developed controlling perspective through the grid, the artists of today are offered alternative controls over perspective, gravity, even to some extent, the audience. The computer unifies all images, sounds etc. to become information, which can be manipulated. I have tried to define the character of the reason each interviewee offered as their starting point with the computer.

Sculptor David Blandy was interested in the idea that by changing the scale of an object he could give objects new identities. He describes becoming frustrated, as the objects he chose could not escape their reality. For example, he cited employing rows of clothes pegs, which he saw as an army, but other viewers could not get past the pegs, reality of domesticity. To escape this reality he first began to draw a black-and-white comic strip that he described, as "dealing with a flat comic space", which would jump to a photographic space with the drawing superimposed. This eventually led to a virtual space with the environment taken from the computer game *Doom*.

Blandy made a shift from using real, tangible objects and spaces to creating, through drawing and photography, his own version of reality, enjoying the freedom two dimensions gave him to control objects. Eventually he constructed a totally virtual space that became a space he wanted to explore. He had the idea that he wanted to get inside the virtual world of computer games such as *Doom* or *Tekken*. Blandy is excited by the promises of scientists/technologists, that we will eventually be immersed in a virtual world, which will be believable down to touch and smell, but recognises that the technology still needs further development. He sees us in a transitory phase, where artists are running to keep up with new technology and where the technology has not yet met the promises and imagination of artists. The computer's ubiquity must for Blandy be reflected in the way we make art; he described seeing virtual space as separate, but intrinsically linked, to reality. Blandy is working with computers to place reality into virtual space to question reality, and reflect that as a society we increasingly measure our idea of reality through a virtual version that, I find, is both fascinating and frightening.

Sculptor Andrew Sabin began to use the computer to manage his affairs as a 'secretary' or 'agent'; for him it became a bridge between the artist and the art world. Andrew Sabin described the use of his computer office software as thoroughly liberating, a

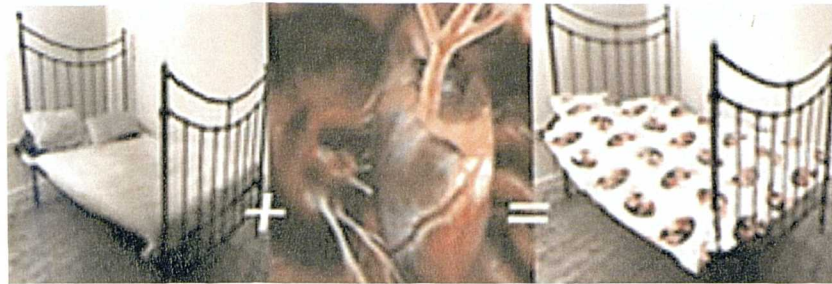


fig. 5 Kate Allen, *Lovecover*, 1995, result of chain of Artoids images from Internet original images by Alistair Raphael and Jane Prophet.

means through which to depersonalise the art world. “There is a tendency to become obsessed with certain individuals in the art world, if they are just in the computer on a folder, the big names have the same presence as the small ones. You just play the whole lot, and it all becomes less intimidating.” For Andrew Sabin the computer provided an interface, which made the art world more “user friendly”.

Jane Prophet, a digital/installation artist, began to use the computer as ‘editor’ or ‘film director’. Her intention was to continue studying video; but due to funding and the fact that she was more interested in the ideas than the technology, she decided to, “jump in at the deep end and try something new. I went to Coventry University to do an MA in Electronic Graphics, which enabled me to use a computer (I’d never even used a word processor before.)”

Jackie Hatfield, a sculptor, approached the computer as ‘performer’, very aware of the relationship with the audience: “the notion of putting the audience in an active relationship with the artwork. Encouraging the audience to be tactile and to effect a change in the work”.

Helen Sloan, a curator, was interested in the computer and its influence on cultural systems and production systems. Sloan worked with friends who were studying at Middlesex University in 1987–88; they set up a group called *The Computer Culture Group*. Through these artists she said she could “see a real possibility for the use of digital media in terms of expanding the way we actually produce work.”

These varying responses to the methods in which the interviewees use the computer are examples of the flexibility of the computer, reflecting their interests and concerns. A desire to control is in evidence, for example, over space and scale for David Blandy or over the art administration for Andrew Sabin, or to allow access for control by the audience as with Jackie Hatfield. For Jane Prophet, Helen Sloan, in fact, all of the artists, there is an element of recognising the importance and possibilities of the influence and effects of digital technology on our culture and wanting to reflect on this.

My own introduction to creating computer imagery occurred when I took part in making images for the Artoids Internet site (www.illumin.co.uk/artoids/pages/gallery/) (fig. 5).

The idea of the site was to create a constant chain of imagery that would work as a metaphor for the spread of the HIV virus. Initially six artists placed their images on the web and invited users to download their photographs and create new images from

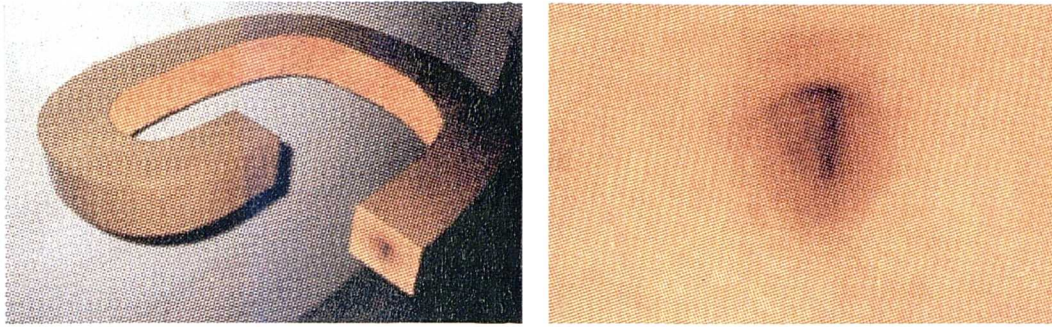


fig. 6 Kate Allen, Waistspace, 1996, Digital print.

them; these would then go back on the site to be manipulated by others, and so creating a chain of changing images.

The proliferation of images moving further away from the original led me to consider the power of the computer in a world of image bombardment, where we spend less and less time viewing ever more images. The first images I put together from the originals were of a bed and a heart. Using Photoshop I painted a white duvet onto the bed's bare mattress, from another I cut out a heart and made it into a repeating pattern as a duvet cover. I then decided I wanted to mix one of my sculptures with one of the images from the original six. I constructed a sculpture out of wood, then photographed it, scanned it onto the computer, and using Photoshop added the images of a navel, down-loaded from the original images, to the inside of the object (fig. 6).

For full interview transcriptions refer to appendices C to H.

Chapter 2: Flattening Reality

Through the influence of television/mass communications we live in an image-saturated culture, and in keeping with many working in the tradition of artists in the twentieth century, I felt it necessary to enlist the media that produces so much of our visual culture. The relationship between mass media and artists is highlighted by the dispute between Turner Prizewinner Gillian Wearing and advertising agencies. Wearing has accused advertisers of stealing her ideas. The work in question consisted of a series of photographs entitled *Signs that say what you want them to say and not signs that say what someone else wants you to say* (1992–93). Wearing felt that agency BMP DDPB Needham stole this idea for a car advertisement. She has also accused M&C Saatchi of using her video pieces for an advertisement without permission.¹³ The relationship between advertising methods and certain art practices are so close now that it is hard to pinpoint where one begins and the other ends. Wearing uses many of the techniques of advertising and the television confessional in her work – for example *Confess All* where she asks strangers to “confess all” while wearing masks. Wearing’s work, heavily influenced by advertising, has been reabsorbed by this media (fig.7).

Mass Media

The term ‘mass media’ is used to describe communication systems. Vehicles of mass media communication such as billboards, television etc are commonplace in the modern world. However, mass communication pre-computer was traditionally one way – sender to receiver. The computer influence on mass media is of particular interest to me because of the possibilities it creates for image manipulation and interaction, for example, through the Internet. Also, the computer enables me to create models and



fig. 7 Gillian Wearing, Confess All On Video. Don't Worry, You Will Be in Disguise. Intrigued? Call Gillian, 1994. 30min video.

simulations of reality, which can become a part of the image-mediated world that I find so disturbing. The world presented to us, for example, on television or in a fashion magazine, is often a distorted view of whatever reality is. Yet we strive to copy and conform to the representations offered to us by (often all too-perfect) 'reality'. So we, the recipients of mass media, may become models of ourselves.

Recent research by the British Medical Council *Eating Disorders, Body Image and the Media*¹⁴ concluded that images of thinner women are a "significant cause" of eating disorders such as anorexia and bulimia. An estimated 7 million women and 1 million men in Britain suffer from eating disorders.

The rise in young women dieting in an attempt to become the model 'size 8', an image they assimilated from a glossy magazines and advertising etc., is an image that will have been digitally enhanced and manipulated. Their appears to be a growing confusion in the reporting of films and soap operas, where the events of fictional characters often make the front page in our newspapers. The events of these characters are discussed as if they were friends or relations, and serious debate is given as to whether gangster films such as *Lock Stock and Two Smoking Barrels* encourage young people to take up crime.¹⁵ Fictional characters can become role models that we try to emulate, often becoming dissatisfied with how we actually look or what we can really achieve.

Simulation

The idea of a world of simulation, where image distorts reality, is discussed in Jean Baudrillard's book *Simulations* (1993)¹⁶ where he describes the "murderous capacity of images, murderers of the real", giving the example of Disneyland as a perfect model of the order of simulation. Baudrillard gives a breakdown of what he describes as, "the successive phases of the image:

- it is the reflection of a basic reality
- it masks and perverts a basic reality
- it masks the absence of a basic reality
- it bears no relation to any reality whatever: it is its own pure simulacrum."¹⁷

So Disneyland begins as a reflection of "The American Way", idealising the values of America. America is presented through an imaginary world, Disneyland. Baudrillard believes Disneyland hides the fact that America itself is no longer "real" but a simulation or Hyperreality.¹⁸ Baudrillard pushes the idea of simulation to the extreme; obviously America does "exist", but in a country that has developed fat-free fat, Baudrillard's reasoning parallels my own investigation of the relation between the 'real' and the 'virtual'.

A person who pretends they are ill can psychosomatically produce physical symptoms the line between the real and the fake or virtual becomes blurred. It is this blurring that is at the crux of my investigation explored through the use of the computer image in my practice.



fig. 8 Advertisement for Special K, 2001.

Image Consumption

According to Baudrillard, it is the image that is consumed in contemporary capitalism, not the product; Lash and Urry¹⁹ explore Baudrillard's account of the transition from industrial capitalism to consumer capitalism in terms of semiotics. Within the industrial capitalist relationship of semiotics the signifier operates as image, the signified as meaning and referent as the object in the real world to which both signifier and signified refers. Baudrillard argues that for consumer capitalism, the product in the real world is no longer important, the signifier and the signified are joined under the title of Sign. It is the Sign or the image that is consumed and exists free from a referent or product. Lash and Urry give as example of this research into advertising practices from 1911 to 1980²⁰, where they show a decline in written detailed descriptions of products and an increase in visual imagery, particularly after the Second World War. In the early examples of advertisements, women were shown in traditional functional roles and the advertisements instructed the consumer in how to use the product. In more recent examples the function of the product is hardly mentioned. The images of women are now more likely to be cast in the role of sex object; images are attached to products like adjectives. Women are no longer told how to use a product but encouraged to buy it in order to be like the sex object associated with that product; men to buy the product in order to have the woman. The logo and the lifestyle accompanying a product have become more important than the product itself (fig. 8).

My use of digital image technology reflects the desire in my practice to explore this sense of depthlessness, hyperreality or hyperspace. "In place of the 'deep' expressive aesthetic of unique style characteristic of Modernism, there is now schizoid pastiche, the 'flat' multiplication and collage of styles; and an art whose imagery appears depthless."²¹ (Jameson, 1994, p137)

Difference

The model of understanding via difference is a fundamental structure of Postmodernism. The system of “difference” was employed by feminists to question the male-domination of art history; dismantling the traditional notions of originality and authorship.

“It is precisely at the legislative frontier between what can be represented and what cannot that the Postmodernist operation is being staged – not in order to transcend representation, but in order to expose that system of power that authorises certain representations while blocking, prohibiting or invalidating others.”²² (Owens, 1985)

A language of “difference” is also binary language, the code of computers, which functions by recognising the difference between 0 and 1. I began this research through problems in my practical work, when I decided to construct sculpture that was built out of ‘calories’. In my search for the most appropriate way to represent a lack, or loss, of a physical substance or, more prosaically, the loss of flesh through dieting, I came to regard the computer as a possible means to create the work. I reasoned that a calorie has no physical presence, and the computer reduces everything, (images, 3D objects, sounds, and words), to a series of numbers. Both calorie and code reduce the ‘physical’ to a ‘virtual’ state, so I imagined that by using the computer to ‘build an object from calories’ it could become ‘real’. I was inspired by reading the metaphysical writing of Jorge Luis Borges, *The Circular Ruins*,²³ where a man dreams a man into existence, then understands that he himself is also an illusion and that someone was dreaming him. The all-encompassing quality of the computer unifying all information to a single database allows for diverse disciplines to converge. This linkage and means of production encourages the idea that the computer may be considered as both a “Tool” and a “Medium”. (Lovejoy, 1994)

I made a series of sculptures, their shapes taken from the space a body takes in the world. The last of these was *Waist Exclusion Zone* (fig. 9), which consists of a wooden gauge marking out the waist sizes from 24-inch to 54-inch waists. From this work I wanted to make a piece of sculpture built from calories shed when dieting. I was also interested to use digital techniques to explore the influence of media representation upon body image, and the relationship between image and lived experience and self-esteem. Luce Irigaray observes that: “In our Culture, the predominance of the look over smell, taste, touch, hearing, has brought about an impoverishment of body relations... the moment the look dominates, the body loses its materiality... and is transformed into an image.”²⁴ My project, is in part, an attempt to articulate and explore this, using computer software as an addition to my sculptural practice.

A New Kind of Representation

I think sculptors have been slow to use computers because computers are usually used to produce an image rather than an object. It was the quality of simulation of computer generated imaging, separating it from other two-dimensional image-making, such as photography, that became of interest to me. After manipulating photographs in Photoshop, I wanted to create the image from the start, within the constructed computer reality. While the photograph is a chemical copy of ‘nature’, the computer allows for a simulated model of reality, which cannot be a physical object or a copy of an

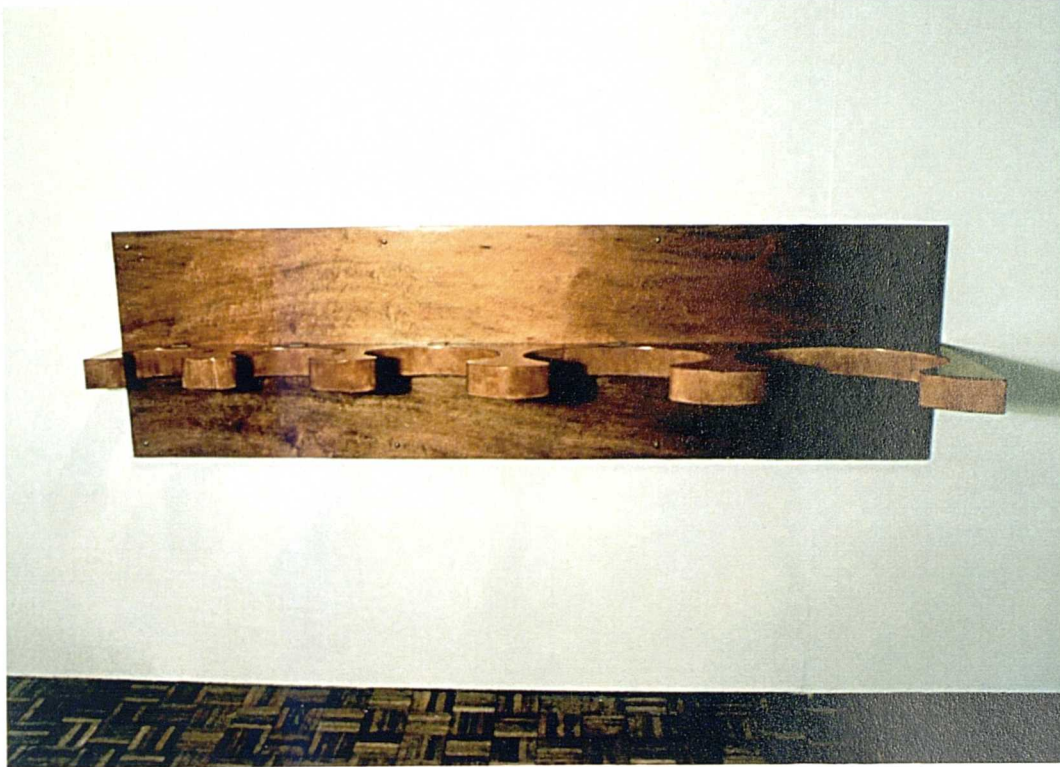


fig. 9 Kate Allen, Waist Exclusion Zone, 1996-97. Wooden gauge shows sizes from 24 to 54 inch waist size, 183 x 60 x 50cms. Detail showing brass size plaque. Audience interaction at Whitechapel Open, 1996.



object as is the case of the photograph. This mathematical model of the real can be regarded as a new sort of representation.²⁵ (Lovejoy, 1997, p160)

I began to combine photographic representations with physical objects in my work, manipulating the torsos of fashion models digitally, commenting on how the use of digital media in magazines, for example, may manipulate our ideas of a 'true' representation of reality (fig. 10). I then wanted to move from manipulating existing photographs digitally, to create an entirely digital image, exploring the notion that simulation can produce a mathematical reality that has no previous existence in the physical world.

It is this 'new kind of representation', that the use of 3D modelling software gave me the chance to explore within my existing sculptural practice. Through this research project, based on experiments in my own work I have begun to understand the qualities and use of the phenomena that Baudrillard²⁶ described as Simulacra; the computer creation of simulations where there may be no original.

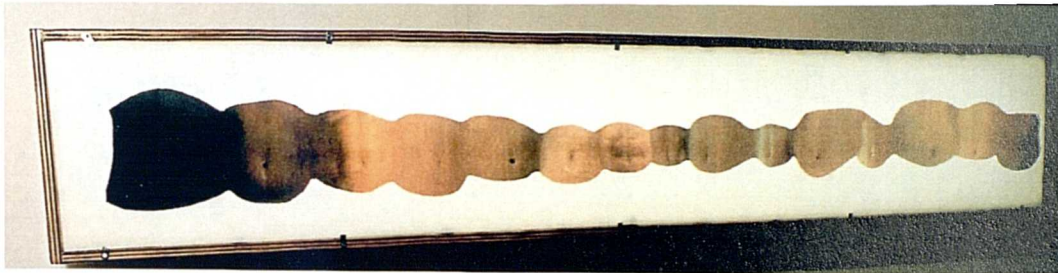


fig. 10 Kate Allen, Which Belly's Kate & Naomi's, 1996. Wood, Perspex, light-fitting and digital printout of magazine models stomachs digitally merged in Photoshop, 180 x 30 x 30cms.

Case Study 1: Have Your Cake And Eat It

Installation/Performance:

Wolverhampton University, November, 1996

Presented at *Consciousness Reframed*, 1st International Conference: The Centre for Advanced Inquiry in the Interactive Arts, University of Wales College, Newport, 1997

The installation *Have Your Cake and Eat It* was conceived in response to wanting to represent a 'lack' or a 'loss' of a physical substance. I read a report of a product called Olestra, which is a non-digestible substitute for fat, engineered to have no calories (Blackburn, 1996).²⁷ A cake made with Olestra is a representation of a 'forbidden' fattening food, which is in fact free of fat. A cake made with Olestra removes the 'rule-breaking' which accompanies the consumption of fat and is thus in some ways a 'virtual cake' constructed in the three-dimensional world of matter.

I began to consider that a virtual cake which exists only as a collection of binary codes in a computer's data storage could become the ultimate diet food. I constructed such a 'virtual' cake using the 3D modelling program 3D Studio.

The appearance of the virtual cake is based on the one which is conjured up in my mind when I think of the word 'cake': my personal archetypal cake. It is a fairy-tale cake, iced in purest white with the reddest of cherries: both fantastic and sexual.

'Cake' in general signifies special occasions – birthdays and weddings. The wedding cake signifies purity and once cut by the bride and groom, the consummation of the

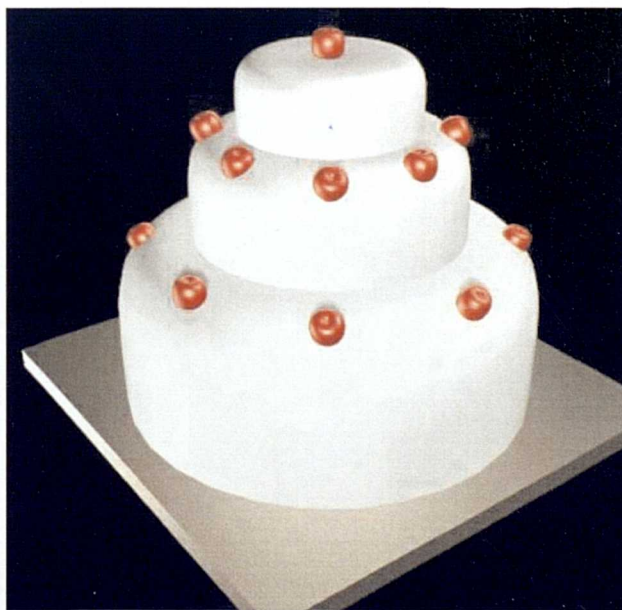


fig. 11 Kate Allen, original computer modelled cake and real iced fruit-cake, 1996.

end of innocence. Once I had constructed the virtual cake, I baked the cake in reality, a giant cake, a reproduction of the computer cake. The cake signified the link between the 'actual' and the 'virtual' and was a celebration of the point between the notion of the real and virtual (fig. 11).

I saw *Have Your Cake and Eat It* as a 'rite of passage'. In the book *The Rites of Passage*, anthropologist Arnold van Gennep²⁸ examined what he termed "life crises" and the ceremonies that accompanied them. He proposed that ceremonies have three stages, Separation, Transition, and Incorporation. He named the transitional phase as Liminal, *limen* being the Latin for 'threshold'.

I decided to have a ceremony, a tea party where I invited people to eat the cake, and take part in my liminal step from the Actual to the Virtual (fig. 12). As it turned out, I stayed firmly on the central threshold. The tea party was a physical occasion, with a table of guests eating the cake and squashing it between their fingers (fig. 13). They tasted the rich fruitcake and sweet icing and licked the glacé cherry syrup from their fingers, all of which led eventually to a pile of crumbs. Meanwhile, the virtual cake kept spinning intact and perfect; its image seemed more 'real' than the cake we had consumed. It helped to preserve the memory of the physical cake. The virtual cake that had been the source now appeared as a remnant (fig. 14).

Just after making the cake I read a Jean Borges short story called *The Circular Ruins*. In the story, a man dreams another man into existence, only to worry how he will break the news to this man that he is only in existence because of another mans dream, "With relief, with humiliation, with terror, he understood that he too was a mere appearance, dreamt by another."²⁹ (Borges, 1964)



fig. 12 Kate Allen, *Have your Cake and Eat It*, 1996, prepared tea party.



fig. 13 Kate Allen, *Have your Cake and Eat It*, 1996, during tea party.

fig. 14 Kate Allen, *Have your Cake and Eat It*, 1996, post party, remnant.



For Borges, the mixing of the real and the virtual in his writings created an arena to explore the nature of existence. This story held a strong resonance for me as it had been a recurring dream I had as a child, that I might be the dream of another child. At the time it was always closer to the feelings of nightmare rather than dream, and I was surprised that Borges had had the same imaginings as my childhood dreams. I made a link to Borges story and the promises made for digital technology in the 1990s, such as the possibilities of Virtual Reality. The prediction was that as technology becomes more advanced the virtual experience will become a believable simulation of reality. Digital technology could give us access to a realistic experience of our imagination and dreams as immersively as a writer of fiction can in our imagination, and consequently the idea of virtual and real becoming increasingly blurred.

The *Have Your Cake and Eat It* installation/performance was held first at Wolverhampton University in November 1996. This piece began to take shape as a reaction to the problems encountered when first building objects with the computer software. In my diaries of the time I recounted how much I missed the physical, tactile nature of the studio, and found it hard to believe that objects constructed on the computer existed. Six months later I built the cake again, as I was invited to present the piece at a conference *Consciousness Reframed* organised by Roy Ascot in Newport, Wales. This time, instead of animating the virtual cake I built it using VRML allowing the viewer to explore the cake, moving the computer-model cake themselves, rather than watching an animation (fig. 15).

Interaction with this virtual cake also affected the relationship that the viewer had with the physical cake. People became more involved as they moved the virtual cake, travelled inside it and discovered a new landscape, an arctic wasteland built from the icing. One participant said, “that’s the first time I’ve ever been inside a glacé cherry!”³⁰ Apart from discovering a new space through the cake, the piece challenged the idea of being given too much information – as inside the virtual cake the viewer could see pubic hairs and tongues with boils on. After seeing what lay inside the virtual cake they were invited to eat the real cake and did so with a heightened awareness of what it may contain. Would they consume something disgusting hidden beneath the frosted exterior? The virtual cake became the sign in the imagination of the viewer as they bit into the physical cake. People would stop and ask me if there was a hair in the real cake. The piece worked as a “simulacra”, or Hyperreality, “because reality itself, entirely impregnated by an aesthetic which is inseparable from its own structure, has been confused with its own image. Reality no longer has the time to take on the appearance of reality.”³¹ (Baudrillard, 1983)

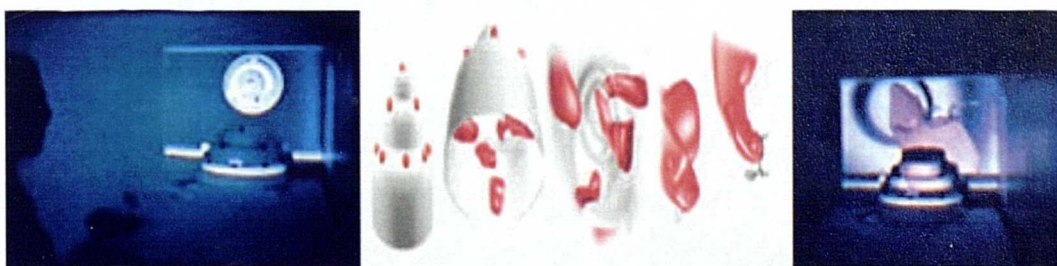


fig. 15 Kate Allen, *Have your Cake and Eat It*, 1997, showing VRML cake and real cake during *Consciousness Reframed* Conference.

Interview Analysis 2: Merging Digital and Fine Art

I asked the interviewees whether they considered the division between digital art and fine art is closing, could computers now be accepted unquestioningly as a legitimate artistic medium.³²

Helen Sloan recounted her experience from 1987 when the *Computer Culture Group* from Middlesex University had a show at the Cleveland Art Gallery *Art and Computers*. She described it as being at the beginning of a new wave of digital media, which she expected would be brought to work alongside sculpture, painting etc., but what actually happened was that digital media became a medium in its own right. Helen and members of the computer culture group were disappointed and bemused that this happened. This division continued into the nineties with Sloan citing the example of *Documenta*³³ where although digital arts were included in this major arts festival the work was confined to a separate section. She mentioned she had real experience of the two merging when she curated the show *Star Dot Star* in 1998 at Site Gallery in Sheffield. This show paid homage to the influential show at the ICA in 1968 *Cybernetic Serendipity*. That exhibition was more like a laboratory with experiments rather than art works. Many of the contributors were programmers who made images. *Star Dot Star* was much more concerned with sculpture and installation with the artist thinking about the form of the work. While Sloan is not convinced that the merge is seamless, the computer has the advantage of its ubiquity, compared to, for example, video art, which would never get space on national television.

David Blandy felt the problem of the acceptance of digital art by fine art is that the viewer associates digital work with entertainment and does not take it seriously. "I want to comment on pop culture through the use of computer games, but I realise that the area I am dealing in is actually quite elitist. It is populist, but mostly only for certain groups, like 16-year-old adolescent boys!" This problem was discussed by Regina Cornwell in her essay for the *Serious Games*³⁴ [from the catalogue] accompanying an exhibition of interactive art, criticising the Postmodern art world of "dumbing down". "The interactive computer work aspiring toward art, yet allied to computer games, was seeking respectability and a home asking to be let in the doors of museums and galleries."

She goes on to quote Susan Sontag, interviewed about her goals as a novelist: "To keep alive the idea of seriousness. You have to be a member of a capitalist society in the late Twentieth Century to understand that seriousness itself could be in question."

There are signs that use of digital media is gradually been taken seriously in an article in *The Guardian Online* in March 2001³⁵. Sean Dodson describes how the software Flash has gained a loyal following amongst artists and designers, he gives the example of the ICA (Institute of Contemporary Arts, London) hosting the on-line soap made with Flash (www.Map50.com) and a showing of Flash movies by both designers and

artists at Lux Cinema London; *Flashlights Prize* is part of a major arts festival in London, *Pandemonium*.

Andrew Sabin is not convinced that digital media and fine art will ever merge. In his opinion art operates by friction; the constant juxtaposition of objects and their context cause friction that stimulates thought. He finds looking at digital art has less friction, he thinks it is hard for things to be out of context and so for him it lacks excitement. I questioned this by arguing that you need to understand the language and the context before there is friction so if you understood the language of the digital world you would recognise incongruity and be excited by it.

I could also understand the 'lack' that concerns him, the desire for the unknown, where the manipulation and placing of material creates meaning. It is hard to find unexplainable thoughts in a world built from 0 and 1, where there is a 'god's-eye' view of everything you create. Perhaps the desire for the unknown is why some artists have used the computer to explore phenomena we could not experience without the computer, for example, the artist Frank Stella's idea to sculpt smoke using computer modelling software.³⁶

The merge between digital and fine art is inevitable, but it should not be forced. As Regina Cornwall puts it, "To investigate what the computer is and why it is different, to act on these differences, and to face the contradictions inherent in embracing the computer in our culture, is one way of addressing art, ideas and seriousness in the late twentieth century." (1997, p15)

For full interview transcriptions refer to appendices C to H.

Chapter 3: Does the Software Determine the Work?

I have been able to use computers in my practice through the use of software programs such as Photoshop, 3D Studio and Flash (fig.16). Some artists, such as Jackie Hatfield and Richard Wright, make strong arguments for artists to learn programming. For me, the problem with programming is that it involves learning mathematical codes to which I would have to devote years. The advantage of programming is it allows total control for the user, whereas software will do specific tasks developed by a programmer. Software gives users the chance to explore the computer without learning programming. The difficulties of learning programming have deterred many artists, myself included. Margot Lovejoy observes that there is a need for artists to go directly to the software with their art education intact, in the same way that an artist can use a camera or video without prior technical knowledge.³⁷ Lovejoy realises that accessibility and inclusion is important to allow the computer to be explored and its use developed by users without programming knowledge. This is clearly fundamental to the integration of computer software into art practice. Jeremy Diggle warns against the ever-increasing choice of media becoming an end in itself: he describes computers as tools and technical support, separate from the conditions of making art. (Diggle, 1997, p117).³⁸ While I feel Diggle



fig. 16 Kate Allen, Classbirds, 2001. Still from animation created with Photoshop and Flash. Part of Assembly commission for Bath and North East Somerset. Working in collaboration with Digital Designer Owen Bryant, creating a series of projections for nightclubs.



fig. 17 Tomoko Takahashi, Word Perfect, 2000, a subversion of Microsoft's Word Perfect online at www.e-2.org/word_perfect.html.

underestimates the importance of the influence of software upon the ideas and creative process of the artist, this 'sense of freedom' that is offered by using software is fundamental to me in considering the introduction of computer imagery into my practice.

After several years spent learning different software packages, Diggle's notion of 'freedom' may be more limited for many artists than he implies. This is due to the steep learning curve involved in becoming familiar with some software. For an artist wishing to use a 3D modelling package, the time that has to be invested in learning how to use it and the expense of these programs, (which the manufacturers are constantly upgrading and making obsolete) can influence the type of work made and the methods of working. For example, in my interview with artist David Blandy, he expressed a problem, which I also experienced: "There is still a steep learning curve for every program. I have had the problem myself where I have been carried away with the making, losing sight of what I originally intended, sometimes it is so difficult to get the computer model working that you feel you've achieved without concentrating on what the piece is about."

Christine Molloy, an artist who uses Flash, also comments on the problem of having to go beyond the power of the program, so you can make work which shows what you can do rather than trying to find the limits of the program.

The design of some software programs can also be difficult to navigate, for example navigating excessive nesting and drop-down menus. Hopefully, if more artists become involved with designing programs they may become more intuitive. Artists are using existing programs made for other commercial purposes and are altering or using them for their own work, mixing them with other technologies or objects such as the web based work of Jodi³⁹ or the installations of Tomoko Takahashi, who was nominated for the Turner Prize in 2000 (fig. 17). Programs rely on using a manual to understand them, which I found contrary to my intuitive method of working, often just having access to a manual is a problem when you learn through a college, as with a multiple licence you

only receive a few copies of the manual. Deciding which programs to learn to achieve the ideas I had proved frustrating, as the use of one piece of software often led to the need to learn at least two more.⁴⁰

Working Methods

One response to this dilemma is the way that some artists work collectively when using digital technology in their practice. The collaborative artist groups Soda (www.soda.co.uk/) and AntiRom (<http://jyanet.com/cap/1999/0311fe4a.htm>) are made up of a mixture of artists and programmers. These groups often make commercial webpages to finance their more experimental work. Working as a group they can pool resources when it comes to buying expensive equipment and software. Collaborative working is very different from traditions of fine art, working alone in the studio. Much artwork now is produced with a more film-like organisation contributing to a final piece. The act of working collaboratively can also be seen as a reaction to the corporate nature of which the computer and, particularly software, is a part, removing hierarchies and ownership by sharing knowledge, equipment and ideas. There seems to be a tension between the decline in the desire or practicability of individual ownership of work, and the charge that digital media makes all imagery, sound etc. bland and similar. This has happened more obviously in music, where the growth in sampling means identities are blurred, media is reused, resampled, so the true creator is lost. A similar phenomenon seems to be happening in visual art, artists more often working under a group title rather than as individuals. This obviously has an effect on the work made, but I don't regard it as necessarily a negative thing. It is the main reason why artists need to get involved with the digital media, so as to be able to question, deconstruct and challenge the corporate media we are subjected too and there are plenty of artists trying to do this. I have been involved in a collaborative project for Bath Festival, but the brief is very loose so feel we have control. As I discuss in Case Study 2 Safety Net, I have found collaboration difficult at times due to my fine-art training and my relative lack of computer knowledge. If the rules of collaboration are not set out clearly there can be a problem with the power exerted by the person (often male) who knows how to program or knows the software program in greater depth than me. I needed additional programming to create the interactive element in my installation *Exorcising the Flesh*,⁴¹ which involved linking a running machine to computer generated images. The animations I built using 3D Studio were put together using the program Director. I was advised that to make the running machine control the animations I would need a piece of bespoke programming. Finally, with much help and advice I used Lingo (the programming language of Director) to give the commands to the computer to change the animations as the computer mouse travelled up and down the screen. This solution was never entirely satisfactory and I felt my ideas had led me to an area I did not technically know how to achieve. With hindsight, I should have paid someone to solve the problem rather than try to learn myself but I wanted to develop my practice and I wanted to be in control.

In questioning how software determines the work it is important to stress the need for work to be led by ideas, and then to explore the cultural significance of the images/interventions produced by software. Without taking these points into account

it is easy to fall prey to the problems described by Richard Wright: “Digital media endlessly subdivides into new options and alternatives, becoming such a powerful tool that it no longer provides the resistance with which to structure cultural forms on the basis of a traditional aesthetic expressivity. Through computer technology, the medium has now surrendered, it offers no resistance to the desires of the user and overwhelms us by its aimless potential.”⁴² (Wright, 1996, p162)

I think Wright offers a valuable commentary – I want to use the computer in my practice, a practice concerned with image consumption and simulation and body image. Wright is of the opinion that artists must have a sound programming base as well as a cultural and historical base with which to approach new media. However I do not entirely agree with his statement; in an ideal world, of course it would be beneficial for all artists to have both technological and cultural skills. To believe an artist must be proficient in programming makes the use of computer technology exclusive and reinforces the notion of digital image-making as separate from the rest of art practice. I believe that by understanding the specificity of software and letting the ideas rather than the software dictate, it is possible to use computer software in sculptural practice to explore our image-saturated culture. It is important for artists to recognise the cultural position of software, the fact that it is part of a corporate image-making machine, and to take this into consideration in the process of making and images produced. It is a challenge for all artists, whether programmers or software users, to break through the corporate screen, and one method artists seem to be using is to work collaboratively. I have struggled with working collaboratively throughout this research and have only recently found a group of people to work with who want to share their knowledge equally. For this project for a new Bath Festival 2001 entitled *Assembly*, a group from the University of Bath, night-clubbers and myself have made a series of images using Flash, which we have projected in night-clubs (fig 16, and figs 29 (pages 43 and 44)). The imagery is a series of random thoughts and images derived from and projected with the music and dance in the club.

Jane Prophet is an example of an artist who, although also commissioning programming, has used commercial software to great effect (Director, PhotoShop and 3D Studio) in her exhibition *Swarm*⁴³ the collaborative work *TechnoSphere* and her CD-Rom *Internal Organs of a Cyborg*. Although not a programmer, Jane Prophet has created the creature parts for the collaborative work *TechnoSphere* (fig. 18), and her knowledge gained through the use of software gives her the confidence to commission programming. In her piece *Internal Organs of a Cyborg* she uses images from a stock photography CD-Rom⁴⁴ (fig. 19) to create a story appropriating existing commercial imagery to comment on the fragmentation and alienation of the body through image and technology.

Vision Machine

Richard Wright may have overlooked one of the fundamental advantages of software: its very accessibility.

I feel Wright may be at heart a Modernist/Constructivist and that for him, the use of software could never be used as creatively as programming – it is not ‘true to the material’. He is not alone in thinking this, artists Jackie Hatfield and Marion Kalmus also feel

that programming is essential for artists to develop a language in digital art. Jackie Hatfield⁴⁵ takes a feminist viewpoint in that as so few women write code, women are becoming excluded from the language and the creation of software: “The potential of what software can do is limited by the commercial structures that dictate perimeters. Market forces determine the production of software and currently men dominate computer-coding authorship.” (Hatfield, 2000, p195) In her interesting essay *Disappearing Digitally*, Hatfield highlights the need for women to recognise that computing language is constructed and women need to be involved in that construction. She points out that if girls are not encourage into maths, science and programming, women will be excluded from constructing the imaginary within the language of computers. While I agree that this imbalance needs to be addressed, for artists working now who wish to make digital images rather than constantly consume them, as part of a Postmodern practice, it is software that is attractive because you don’t have to spend

fig. 18 Jane Prophet, TechnoSphere, 1995-, one of the ‘Beasties’. Collaborators to TechnoSphere include Gordon Selley, Andrew Kind, Mark Hurry and Tony Taylor Moran. TechnoSphere is a virtual environment inhabited by creatures designed by visitors to the TechnoSphere website (www.technosphere.org.uk). Participants have the option to design either a carnivore or herbivore. The behaviour of the creature is dependent on the choice of component parts and is controlled by an artificial life program. Participants are informed of their creature’s progress via email.

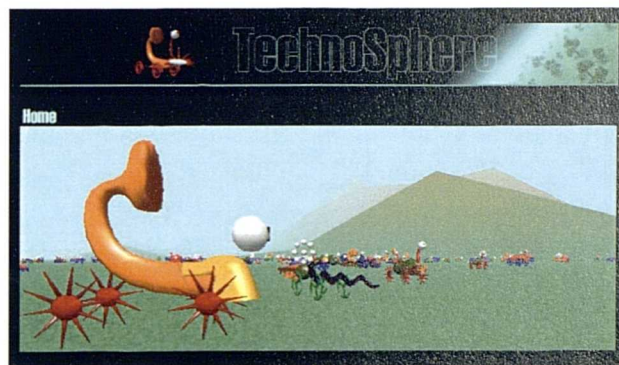
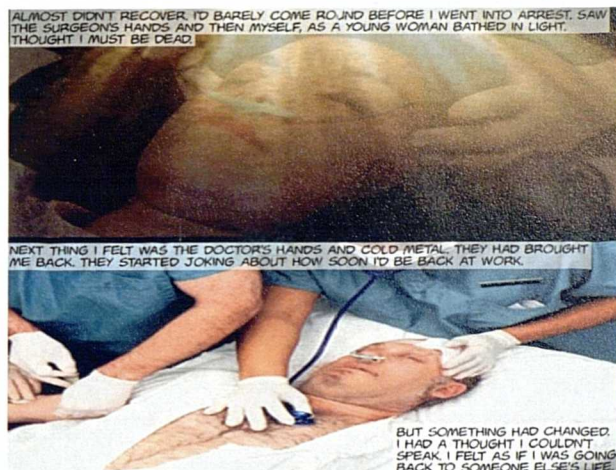


fig.19 Jane Prophet, Internal Organs of a Cyborg, 1999-2000, CD-Rom (www.virtual-ego.net/).



years at college learning code. The approach that artists are taking to the software available such as Flash is to be aware of its commercial role/identity and then making it their own within our culture of eclecticism and appropriation.

Paul Virilio sums up the role of the computer well in the title of his 1994 book *The Vision Machine*. Computer software could be described as the ultimate piece of Postmodern equipment for artists, the ultimate simulator, reproducer, transformer of reality into images, a “Vision Machine” that affects us all and which we as artists can take advantage of regardless of our technological skills.

Interview Analysis 3: Software v Programming

Jane Prophet felt that it was important to have a good conceptual grasp of the technology we want to access, so we can develop and communicate with experts. She talks of the need to speak their language so we can accept when something can't be done or, on the other hand, push it further. Prophet does not program herself, but commissions work and is knowledgeable about what can be achieved.

David Blandy also talks of software in these terms; he says: "Software opens your eyes to what is possible". When asked if he had wanted to learn programming he said he was interested because he wanted to understand how things worked rather than construct his own package. He felt that programming can sometimes become an end in itself, but did recognise that if you were a very good programmer you could go beyond the recognised territory of software programming.

Blandy's concerns are to deconstruct and question the program and computer games that already exist. He describes himself as continually reducing objects to simple geometric forms so they can be built with 3D modelling software, which heightens his awareness of how the physical world is constructed. He has also made videos of himself playing computer games, exploring the effect the game has on his body: "a captive audience, this is the virtual having an effect on the real". Blandy wishes to comment on popular culture through the use of computer games, so the software package or game is central to his work.

Blandy's use of software is similar to my own interest in software and culture, but there is a difference between us in that his interest is in the computer itself. If David Blandy wanted to, he could (and in the future probably will) learn some form of programming – where I do not feel the need within my practice, partly because I would have to overcome my anxiety of learning programming, due to a fear of mathematics instilled through my school education! I found the process of learning software programs a lengthy and steep continuing struggle; I hope I will collaborate or commission, if the need for something an existing software program cannot achieve arrives in the future.

For Jackie Hatfield the use of programming does not just, in her opinion, allow her to be more creative, it is a political issue. In her paper *Disappearing Digitally* she questions the hyperbole surrounding software as empowering. She argues that as software has set pre-authored parameters, the real author of the work is the programmer. Due to what she calls the "dearth in maths-orientated education for women and girls", very few women become programmers with real power of creation.

For Hatfield programming is central to her practice, she describes her desire to "take the machine apart and the code" she expresses the idea of being messy with the equipment. She is concerned with dissecting the physical machine and the code that forms the program. She describes the process of making a work as "similar to sculpture

in that it is very physical". Her enjoyment of the very "stuff" of the computer is echoed by Andrew Sabin's descriptions of the computer: "I count the pixelation as material, the light, the frame". For Sabin, his view of the computer as material overrides questions of whether it uses software or programming.

When I put the question of the importance of programming over software to curator Helen Sloan she acknowledged it was a difficult question. Over all, her attitude was one of pragmatism, in that some artists manage to make work with little knowledge of the computer by directing technicians successfully. But artists who can program do some of the most interesting work in her opinion; she cited Myron Krueger and Jonathan Jones (who collaborates with non-programmer, artist Tessa Eliot) as examples. She equates software with a paintbrush; some people are good at using them, others not so good. She also talked of a "look" that software packages have, that you can get to a certain proficiency or level, but to transcend this "look" (the work which she finds most interesting) artists may have to write their own programs.

I found the idea of a "look" of software important in understanding my use of software, it is this recognition of the set parameters of software and the men (mostly) who develop them, that have gradually become of interest to me using computer software in my own practice. The character of software as pre-digested and controlled invites investigation, questioning and perhaps corrupting. I challenge the corporate construction of a perfect woman with my performance piece *Little Death*. In this work I explore the creation of a male fantasy female for a computer game. The character of Lara Croft from the computer game *Tomb Raider* is mostly built with male pleasure in mind. In my performance, the computer character of Lara was constructed as a physical ventriloquist dummy with computer animation projected onto her. Using software 3D Studio which exports to VRML, I built a metaphor for sexual clitoral pleasure, a blancmange with tongue and cherries. This VRML model of a blancmange can be moved by rollerball mouse to expose the tongue and cherries inside. The roller ball mouse is set into the lap of the Lara Croft dummy. The dummy Lara Croft then sits on my lap, with my arm through her sleeve. So that it looks like her arm. I move the rollerball mouse in her lap to directions on a sound track, "left a bit, right a bit, up a bit etc.", the voice becoming more and more ecstatic as the performance proceeds. The performance also alludes to the frustrations of using a computer, being directed and advised by a machine that has a set of logic we must try to follow and understand. Because the image is projected on to me, I sit in the glare of the computer image, I am at once engulfed by it and yet can't really see it clearly.

Both programming and software can have a place in sculptural practice. It is unnecessary to dismiss one for the other. It may be that programming provides true creativity and flexibility, but software provides accessibility and as David Blandy enthused, can open your eyes to what is happening and what is possible digitally. The ready-made software program, whether it is a game or aid to work with, is a phenomenon of our culture in need of exploration. By using software with knowledge of its limitations and cultural position, the non-expert can examine this facet of everyday life with a different viewpoint from that of the programmer.

For full interview transcriptions refer to appendices C to H.

Interview Analysis 4: Collaborating Creatively

I asked the interviewees how the computer had changed their practical methods of working. All except David Blandy had found it necessary and/or desirable to work collaboratively, or commission computer skills they did not have. Blandy was the exception, but at the time of the interview he had been on a degree course where he could get help from technicians and lecturers. Blandy was also the youngest artist and had been using computers from childhood.

Jane Prophet has experience working within a team on *TechnoSphere*, an experience that she described as “radical”. Although she had very definite ideas of what she wanted in the piece, she describes the programmers as coming up with great new ways of thinking about things. On other projects such as *Swarm* collaborators worked for her to her specification; but even then there is a creative dialogue and in some cases creative tension.

When Jackie Hatfield responded to the question about collaborations I was interested in her terminology: she described collaborators as “crew for the productions”, she also said she has help with coding and making the systems work.

Using film or theatre terminology linked with the concerns of the curator Helen Sloan; she mentioned artists’ groups such as Audiorom (www.insomnia.dircon.co.uk/audiorom/welcome.html) and AntiRom. She felt this was a way for artists to deal with the problem of pooling different skills, even if she was not entirely convinced that they were overcoming the problem. Her main point on the subject of collaboration was to highlight the problem of technicians being given very little credit for their support. She felt art productions should be credited in a similar way to that done in film production, which is obviously something that Jackie Hatfield is also aware of.

The question of crediting technicians and collaborators is often a cause for concern in the arts, and the complexity of many computer pieces and the fast turnover in new technology, not to mention the eclectic nature of contemporary art, brings this issue to the fore. We are still working in a hierarchy where artists are considered more ‘important’ than technicians. In the film world there seems to be more equality, as without everyone’s input a film cannot be made. Perhaps because of the Modernist tradition of the lone genius artist, art produced in collaboration often misses the ethos of a group effort. An artist not writing their own computer program or building their own model could be regarded as having less artistic control or integrity.

Andrew Sabin also experienced a problem dealing with collaborators. He asked me to collaborate with him by building a computer model of an installation he was intending to construct in metal, using 3D Studio. The model was to be of a large-scale installation, *The Open Sea*, to be built at the Henry Moore Institute in Halifax. Sabin had to give the organisers an idea of what he was going to make. When the piece was finally constructed in the gallery, Sabin was surprised by how much the computer drawing I

had made looked like the finished piece; in fact, it annoyed him. He found it difficult to recognise the computer drawings as part of the production process in a discussion held at the gallery. I was surprised and intrigued by this reaction.

When interviewing him later he said it was his annoyance and the fact that he felt protective “of the decision making in actuality, because it is hideously hard work, and all that is maintaining that is a conviction that the result will be different than the drawing, so the better the drawing, the nearer one is to not bothering making it”

I had always thought (as happened in reality) that to experience the work physically was a totally different experience to looking at a computer drawing, no matter how much it looked like the finished piece.

I had never collaborated with anyone before using the computer in my practice. I found it difficult to balance creative input, knowledge of a program, and being able to communicate in the most effective manner with my collaborators. I thought the computer model I made for Sabin worked successfully (perhaps a bit too successfully) because we understood each other’s (sculptural?) language. What I mean by this is that the descriptions Sabin had in his mind, although vague, for example a “croissant potato-shaped thing” were similar to the methods I use to visualise objects in my imagination – possibly more sensual than descriptive.

My next collaborative experience found communication more of a challenge. This was a commission for the Jubilee Arts Organisation where I worked with an expert on the computer program Director. This collaboration was difficult as we each had very different ideas of how the piece should look and what our input should be. In future, I will draw up a clear contract which specifies roles and outlines clearly my expectations of any collaborator.

To quote Jane Prophet: “It’s amazing what can be achieved with some stubbornness, a good programmer and a little lateral thinking by an artist and an open-minded coder.” She finishes this thought by saying that if we have these circumstances then artists don’t necessarily need to program.

For full interview transcriptions refer to appendices C to H.

Case Study 2: Safety Net

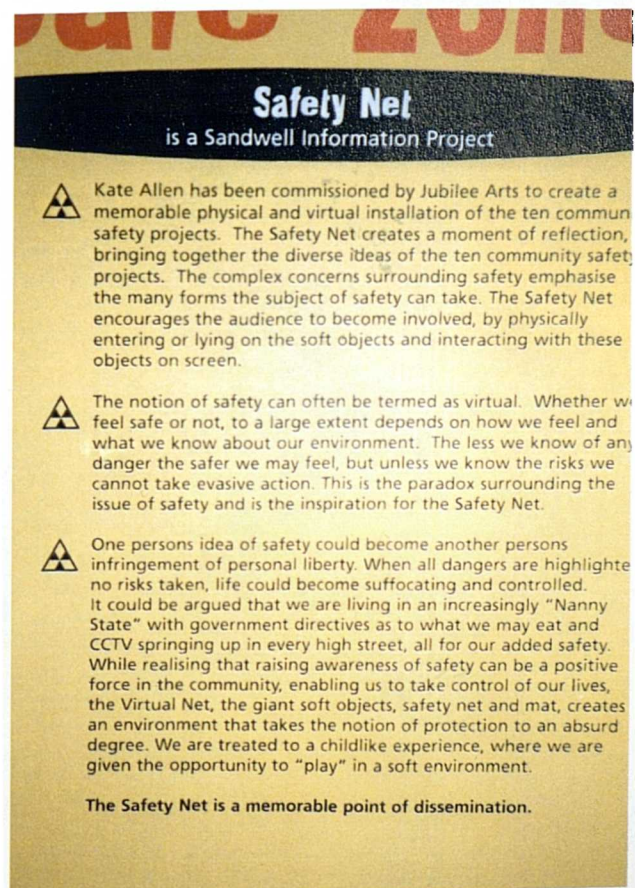
Commission for Jubilee Arts Safety Project

Safe Zone Event, West Bromwich Town Hall, 28 February 1998

Jubilee Arts is a community art group specialising in bringing art to communities through the use of new technologies. Jubilee Arts (www.creativecommunities.org.uk/Register/jubilee.html) is an organisation that puts into practice many the promises made of new technologies by providing access of and education for everyone living in the area.

Emma Chetcuti, a project co-ordinator for Jubilee Arts, approached me in 1997 with some initial ideas for a commission as part of an information project in the Sandwell area of the West Midlands. Jubilee Arts were looking for an artist to make a sculptural information point to link ten Community Safety Art Projects.

The piece was to be shown as part of a one-day event on the 28 February 1998. The event was called *Safe Zone*. Its aim was to showcase the ten community projects where



*fig. 20 Kate Allen,
Safety Zone Event,
1998, text board.*

artists worked with various members of the community to produce imagery. The objective was to provide a stimulating audio/visual context for the projects. The commission for an information point was to be the centre point of all the projects, where links or connections between projects could be made. The targeted audience reflected a wide age group and differing cultural backgrounds with approximately half from the borough, the others from outside Sandwell.

Artists working with different community groups had discussed their ideas of safety, each group having its own emphasis and interpretation of safety. Many people were worried about safety on their housing estates and in the town, people felt vulnerable, no matter how likely statistically they were to be mugged or burgled. Safety seemed very much a state of mind as well as facilities, policing etc.

I was interested in exploring the implications surrounding the subject of safety information, and considered the notion that to 'feel safe' could also be regarded as virtual, or a 'state of mind'. I then tried to visualise this collection of people's thoughts and artworks about safety. Inspired by the collection and dissemination of information on the Internet, I began to imagine the information from the groups as a material that I could map in physical space (fig. 20).

I decided to create my own version of the Internet, a 'net' to produce a collection of diverse pieces of information linked by the computer, presented both in physical and virtual form. The idea of a safety net, ready to catch whatever falls or tries to pass through, seemed a good visual and intellectual metaphor for expressing the diverse nature of the projects, creating links with surprising results. It also became a discussion point about the term safety, for some groups concentrating on the idea of safety as more restrictive than protective.

Contemplating the vast amount of information to be found on the Internet I decided to run a search for the word 'safety' using the search engine AltaVista. The search resulted in 1,572,503 mentions of the word 'safety'. Performing this digital search influenced my ideas. It summed up the diversity and subjective nature of the notion of safety. The subject matter covered ranged from, "Personal Safety. The fear of being attacked or assaulted...", to "Torso Safety. Protect the body part that never gets mentioned..." One of the pages even took me to the "Westchester County Most Wanted" list, complete with mug shots (fig. 21).

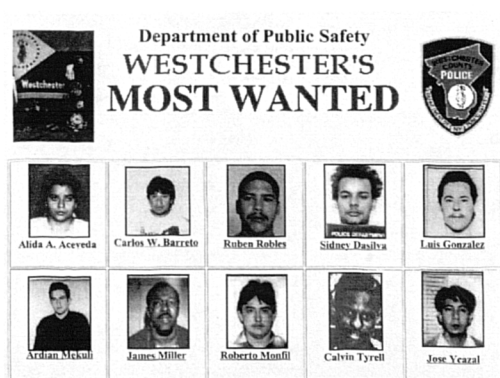


fig. 21 Mug Shot Image result of Internet search for the word 'safety'.

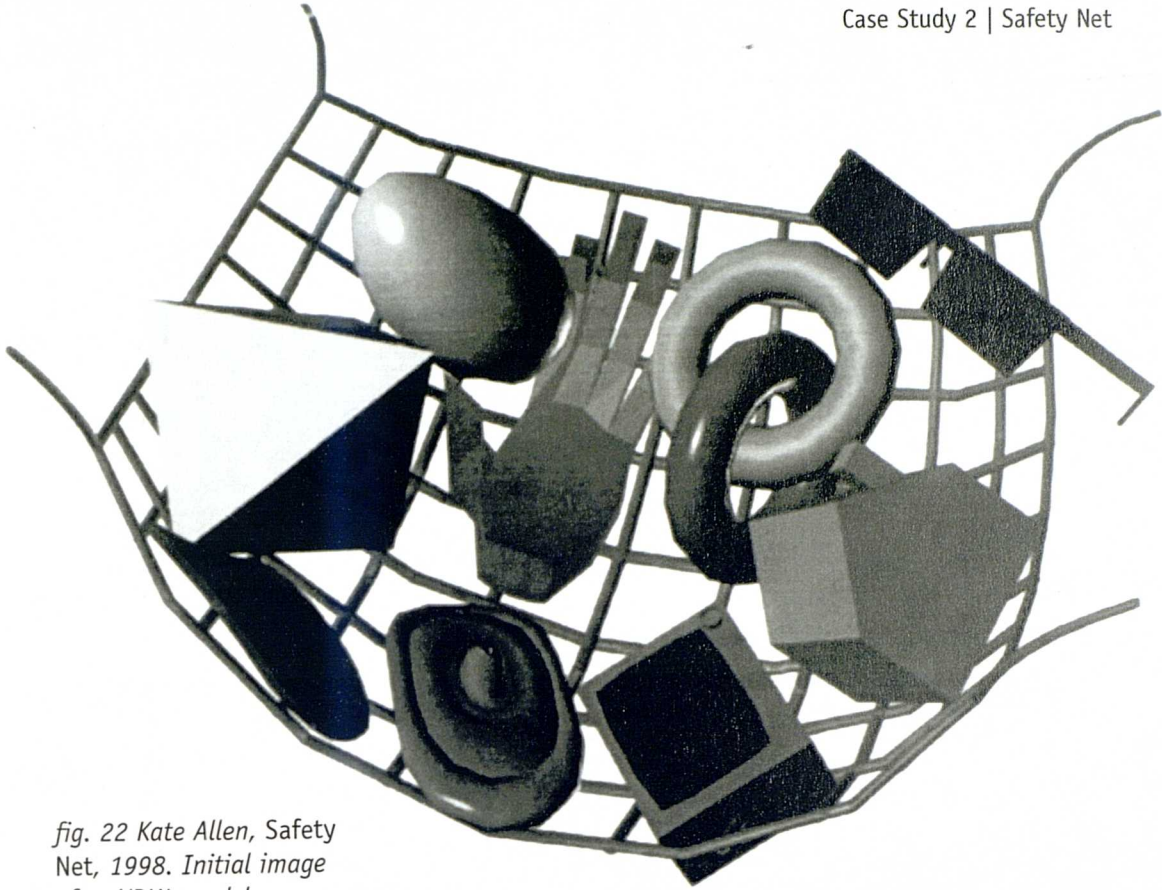


fig. 22 Kate Allen, Safety Net, 1998. Initial image of as VRML model.



fig. 23 Kate Allen, 1998, Safety Net, 1998. Soft sculptures.

I built a net and some objects using computer software 3D Studio, these models were then converted into VRML. The objects in the net were inspired by the content of the different community groups' projects (fig. 22). I then proposed that these computer safety net and objects would be built from PVC plastic in the physical world (plastic is also the simplest form of mapping [covering material] in 3D Studio). Each virtual object would link to a community group's images about safety. The physical objects were built as giant soft toys, which lay on pole-vault mats, and a gym safety net would hang above them. I wanted to create an environment which was soft and safe, like a playpen for very young children, where there are no hard edges. The form of the piece took the idea of padding for our protection to an absurd degree, just as one person's idea of safety can become another person's infringement of personal liberty (fig. 23)

The Process of Constructing the Safety Net

Because of the short time scale Jubilee Arts asked me to work with their computer technician, whose job it was to produce a CD-Rom of all ten safety projects.

During my first meeting with him, doubts were cast over my use of VRML and using the Internet, as in my original idea I wanted the virtual objects to jump to pages on the Internet that were about safety, as well as going to each project. I was aware that using something like Cosmo Player to navigate a VRML model had its problems. I described it as the viewer having to learn to drive before they can really enjoy moving the object. It is possible for the viewer to fly off into black space, losing their sense of location.

This worried Jubilee Arts, as they wanted the piece to be as user-friendly as possible. The other issue of wanting to link to the Internet was also a problem, as once people linked to another site they would probably start surfing, and the community groups, work would not be seen.

The technician had experience using the computer program Director to make CD-Roms. It was his job to record the different community projects, my safety net and the Safe Zone day event on a CD-Rom which could be viewed once the project was finished. He suggested combining the two projects, so my safety net became the access point interface for the CD-Rom. I agreed that the virtual objects would be created in Director (the program used to create CD-Roms) and my ideas for the VRML models would be turned into QuickTime movies.

He suggested that the objects should be animated, rather than the net and the objects moving, as with the VRML model I had made. Also the objects which I had morphing into another shape had to become flat objects rather than 3D models, so they could be transferred into Director.

The technician remade the safety net and the objects, as he said it would be quicker for him to work in Director, but he also felt the objects I had made were too crude. I found we were constantly debating how much detail an object should have. I had built them very simply, he wanted them to look more sophisticated, with more detail (fig. 24)

This was a key point of departure between my idea and his of how the objects should look – VRML and 3D modelling kept the piece tethered to a spatial and sculptural model. I wanted the images to be simple verging on the abstract, but through his



*fig. 24 Kate Allen,
Safety Net, 1998.
Image of entrance page.*

input they became more and more photorealistic. It really made me aware of the differences in approach to building computer models.

I had constructed objects that existed on screen but did not have a function, they did not link to anything – this would appear to be a major faux pas in the world of multi-media design. He wanted to know what would happen once the viewer had clicked on the object. I think we have become conditioned to expect only a very limited range of activities on the computer screen, I felt the emphasis was very much carrot-and-stick, or based on the idea of games. The discussions circled round the idea of how to make it more game-like with me trying to avoid this to keep the whole thing more messy and random.

I drew out nine storyboards detailing what images and information would appear on screen after the viewer had clicked on the objects. I began to start to understand the problems of creating work for CD-Rom. He showed me the main computer screen of the net piece – it looked different from my original models. The net was shown in close up, the materials used were too textured, the sunglasses were not black but mirrored, the durex was see-through not pink, and the bindi was more like a rounded tear drop rather than a flat piece. I wanted him to change them but he protested that there was not enough time. The simple identity was lost for me, without my simplicity I felt that it became too clever and sophisticated, like yet another slick CD-Rom.

Did I give up my control of the construction of the computer element of the piece too easily because I was scared of the technology? Did my ideas get hi-jacked? I feel there is a tendency throughout digital design for everything to be tidy and logical, I wanted more mess.

It was very interesting to build the physical objects after getting to know them so well as digital objects on screen. I worked out the patterns for the objects using low-tech graph paper. It was commented that surely the computer could provide me with a set of plans, but I decided it would be quicker for me using a pencil and paper.

Evaluation of Safety Net Day Event

I was pleased with how the soft objects looked in the installation. They provided the central focus for the exhibition of the community projects and performances, which

took place that day. Each group had chosen such different subjects, the *Safety Net* provided a reflective, playful and relaxing environment, where the audience could view a brief taste of each of the projects and find out some information, while lounging on the soft playful objects (fig. 25).

There were problems with the physical safety net, which was borrowed from the Territorial Army. This had all been arranged by phone through Jubilee Arts. When I arrived at the town hall to install the piece, I realised that it was a scramble net with pieces of wood attached, as one would find on an assault course. It looked like it would injure someone rather than save them from falling. So that meant I had no net, and I had to construct a net hurriedly from a ball of rope.

The fall mats were sufficient, but not as big as I had imagined them. The problem was that I was imagining the mats that you have at the Olympics to break the fall of the pole vault, but these mats were from a local school and so not as big. This was disappointing because it made it not quite extreme enough. I wanted the space to feel too safe, too padded, more claustrophobic. As it was, the physical pieces provided the perfect place to sit and enjoy the show, but I had hoped it would be more extreme. I should have gone to view each of the physical elements myself well before installation, and not rely on descriptions of them.

The Day of the Event

On the day before the event there were many technical problems with the computer, and a new one was brought for the event, which unfortunately also went wrong.

Because of problems with the computers, the technicians had still been working on installation of the *Safety Net* late into the night and into the next morning. Because of



fig. 25 Kate Allen, *Safety Net*, 1998. Audience taking part in *Safety Zone* event.

various technical problems, the piece looked unfinished, with the mouse and keyboard hanging attached by gaffer tape on to the soft sculptural mouse mat that I had made for the piece.

My plan was that the mouse and keyboard would be hidden inside a box I had constructed and covered with PVC. The keyboard dangling at the side meant that it could easily get knocked or touched by the audience, which kept happening, then the screen would go white and various error messages would appear. It looked unprofessional, and I felt disappointed by the whole thing (fig. 26).

I did enjoy watching the audience lolling over the soft objects distorting them. The feedback I received on the day confirmed my impressions. The audience enjoyed the physical aspect of the work; they thought it made an interesting central point for the safety projects. But due the technical hitches, the distance of screen and the fact that the lighting was too bright in the hall so the screen did not show up well, the computer element left people feeling rather bemused.

The audience was very keen to interact with the piece at first, but quickly became frustrated when, after clicking the mouse a few times, nothing happened or an error sign appeared.

The physical aspect of *Safety Net* made more of an impression on the day. I think the main problem for me was that I expected some kind of fusion between the virtual and the real object, as I had experienced when I started to explore with the virtual model and the real cake (*Have Your Cake and Eat It*). This did not occur; the piece did not work properly technically and the screen where the virtual images were projected was at least 4 metres from the objects, so a sense of separation was introduced, also the light was so bright the projected images were very faint. All these elements I found I could not change on the day. My lack of knowledge of certain software was a problem and as a result I lost overall control of how the work would look.

I have learnt how important it is to know and be clear about each others' roles, and who has overall artistic control. I experienced a power play, where the people who have the most knowledge of a computer program and how computers work have greater control over the final image. The experience also made me very aware of the differences of approach to the process of design. The desire for everything on screen to be designed and have a coherence was very persuasive and in some ways against my instinct, my dilemma was whether I could ever find my own voice amongst the pre-determined choices of commercial software.



fig. 26 Kate Allen, Safety Net, 1998. Problems with the computer led the technicians to tape keyboard to box.

Chapter 4: Problems of Presentation

Integrating computer images with my sculptural practice led me to consider the methods of presentation to the viewer. In my own practice, mixing real objects with digital images poses problems and it can be difficult to construct a cohesive installation. I responded to this in several ways. I used a mirror in my installation *Exorcising the Flesh*,⁴⁶ with the mirror as a way of equalising the space and of merging different information – specifically the physical objects and the viewer with the computer models. I tried to create a ‘hyperspace’, commenting on the shallow yet mesmerising attraction of body obsession and repetition of movement within the mirror-walled gymnasium (fig. 27). I was very keen to lose the physical presence of the computer screen, or even the digital projection. I attempted to do this by using back projection, which would then be seen reflected in the mirror. The mirror became a vehicle for mixing the physical body and body image, with computer-generated calorie image that I had imagined. In my imagination I was mixing the ‘virtual’ with ‘real’.

David Blandy had also explored the physical presence of the computer screen. He had used a pane of scratched glass onto which he projected the image of a tunnel. The virtual tunnel had no end as he tried to create an infinite virtual space. He regarded the



fig. 27 Kate Allen, *Exorcising the Flesh*, 1998.

glass as a screen of the computer. I feel that there is a tension between escaping from the computer screen yet still exposing the physical properties of the computer screen and how we perceive it, the glass is reminiscent of the grid in the Renaissance capturing a three-dimensional world in two dimensions. When Blandy considered where he was in the space he had created, a spectator watching from above or in the tunnel, he realised he needed to be inside the tunnel, which led him to consider his most common experience of virtual space, the computer game.

The potential for the viewer to intervene in *Exorcising the Flesh* by using the running machine that would then activate the animations, was my attempt to connect the audience with the computer images and the physical objects, without the computer becoming the centre of attention. I hoped this combination would solve the problem of how many people could experience the piece at once. In a gallery situation, using digital technology I had noticed that often only one person at a time interacts with the digital work while the rest look on. This is sometimes due to the physical limitations of the technology, for example, using a headset to view Virtual Reality or interaction using a computer mouse, but often with work where the audience are invited to get involved people often prefer to watch everyone else rather than actively participate.

David Blandy talks of trying to bridge a gap between real and virtual space, and considered his most successful work to date as a piece which uses the backdrop of a computer fighting game called *Tekken*. The image was then mapped on to the inside of a cylinder in a 3D modelling package. A camera was then rotated inside the cylinder, which created the illusion of a continuous forest space. Blandy thought the piece managed to blur the boundaries between real and virtual space: he described many people viewing the work becoming disorientated, not being able to distinguish whether the wood was a real wood that had been filmed, or a fictional wood modelled by computer. Blandy wanted the viewer to recognise the mediation of a digital image, but to be uncertain of the origin of the image. He found that projecting the image life size created a sense of immersion and for Blandy meant he could enter inside the, for him, familiar space of his computer game. He describes wanting to explore the virtual space and 'how to exist in it'. What is it that lures us to explore virtual space and what can it tell us about reality?

Blandy describes his computer-game-inspired virtual space in terms similar to Frederic Jameson's description of the Postmodern – depthlessness; "I saw the space as dark and shallow, the trees were only on the surface, it was hard to imagine travelling through them" (fig.28).

Blandy was frustrated with the surface image of the wood he had created. He said; "I feel about computers in general that it is hard to get beyond the surface and into the bit beyond".

Blandy seemed willing to suspend his belief beyond the surface image when playing a computer game, which he found very immersive, but in the gallery he felt the audience expected more. Once the audience is taken out of the definite rules of the game scenario they are more difficult to satisfy. The audience will look for a place beyond the trees search for depth where there is none. A novel and a film create their own world, within which we can immerse our imagination, in the theatre we have to suspend our belief to enjoy what is presented to us. When presented with computer



fig. 28 David Blandy, *Ring*, 1998. Detail from video projection, Kapil Jariwala Gallery, London

images on screen in the format of a game we understand the structure but, stripped of these rules in a gallery installation, the virtual and the real become uncomfortably mixed. Leaving artists and viewers unsatisfied as Blandy describes it, we are promised virtual space and we expect it to be limitless like reality, but it is always defined by the programmer “the environment is all sorted out before you get there.” Is this a problem of Postmodern art where there are no limits? If we create a virtual world that could be described as Modernist where we can have total control, perhaps we are bound to be disappointed.

The idea of interactivity played an important part in the introduction of computers into my work. Although I have since learned that the term ‘interactive’ has limited application, as the viewer can only interact as much as the artist has allowed when constructing the piece. I have found the most successful interactions tend to work where the audience is given a clear set of tasks that they can fulfil, rather than being presented with the possibility of endless potential.

Myron W. Krueger⁴⁷ was one of the first people to explore interactive environments: building interactive video environments from the late 1960s such as *Glowflow* and *Videoplace*, which, using computer control, detected and responded to the viewers’ movements. Krueger was a pioneer of interactive performance art, mixing live action with real-time video and the idea of shared virtual space. This is important and of value to myself, as I am interested in creating a space ‘working between the actual and the virtual’, where physical and virtual image can co-exist and where interaction can be integrated.

After creating the installation *Exorcising the Flesh* my stance on interactive work changed. I had found it very frustrating – I watched people interact with the piece, I

wanted to show the audience what to do or explain what was going on. This may have been a failure of the piece, but led me to consider what I really wanted and how much control I desired. I realise I didn't really want to give the audience a false sense of control. This realisation led me to create a series of performance works, which consisted of a ventriloquist dummy, which looked like the computer animation star from *Tomb Raider*, Lara Croft. The dummy had various VRML models projected onto her. I realised that I felt I could communicate my ideas if I was the one to interact with the computer while my audience looked on.

I continue to work with the dummy of Lara Croft performing in different situations and developing the images I project on to her. I became aware of the importance of the environment where the performance occurred. I wanted to be part of an environment where the performance could continue as part of a series of other events rather than be the main focus, as the work is not theatrical and has no ending. Since this piece I have been creating animations to be projected in nightclubs, on people dancing, on objects in a club such as speakers and mirror balls. The construction of work is becoming more random, allowing connections to be made as the images are projected as one part of a complete experience (figs 29).

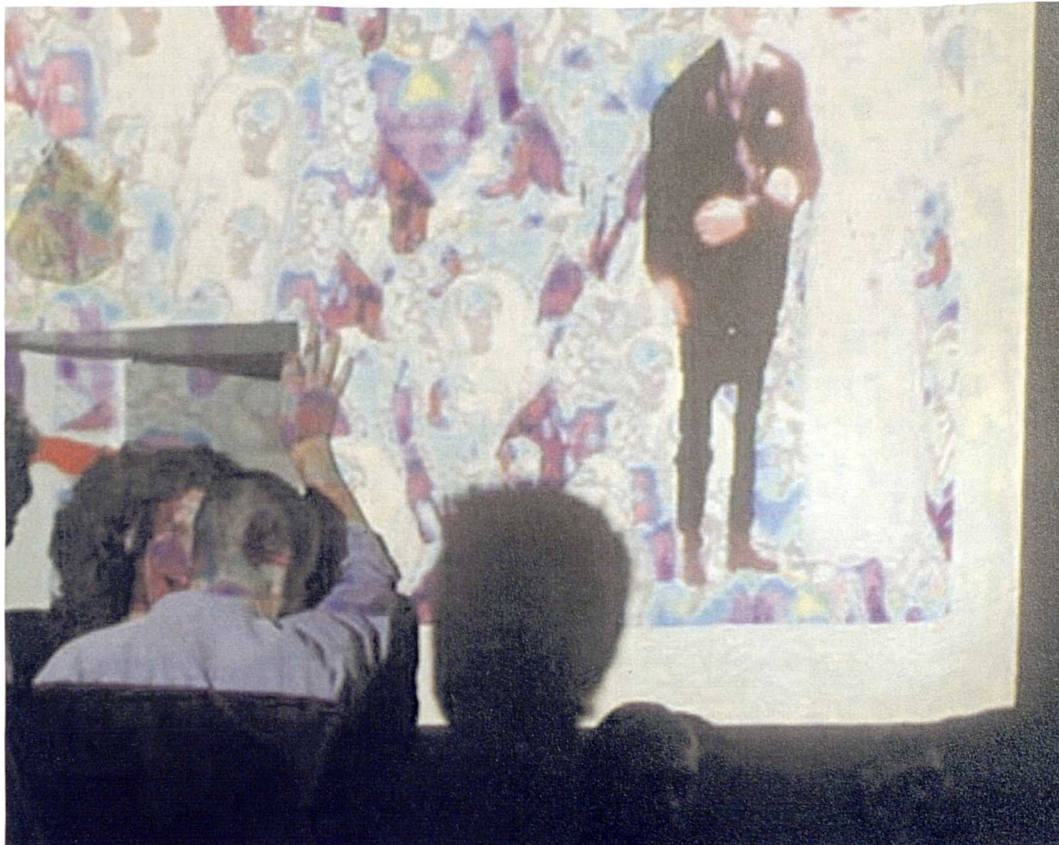


fig. 29a Kate Allen, Projection at Moles nightclub, Bath, 2001. Part of Assembly commission for Bath and North East Somerset. Working in collaboration with Digital Designer Owen Bryant.



fig. 29b Kate Allen, *Projection at Moles nightclub, Bath, 2001*. Part of *Assembly* commission for Bath and North East Somerset. Working in collaboration with Digital Designer Owen Bryant.

User Friendly

The term 'user friendly' is often referred to when discussing computer interfaces and interactivity. I found this can be misleading, in that computer interfaces are often anything but friendly, a point made by Brenda Laurel⁴⁸ in her book *Computers as Theatre*. Brenda Laurel discusses the design of the computer interface and the use of metaphor to explain what is happening on the computer screen, for example, the metaphor of a file to represent the computer storage systems. She goes on to suggest that: "In actuality, interface metaphors are *similes*; whereas a metaphor posits that one thing is another, a simile asserts that one thing is like another." (Laurel, 1993, p129) I found this relevant, as she is acknowledging the notion of simulation; the computer interface is like something, but cannot take the place of the real thing. It is the computer as provider of an alternative representation that I find interesting.

Laurel then cites the work of T. H. Nelson who gives an alternative to metaphor in design, which he calls "virtuality". "The design of a virtuality is driven not by its likeness to real-world phenomena but purely by *conceptual structure and feel*." (Laurel, 1993, p132) I found this idea attractive as it echoes some of my experiences when building sculpture – not trying to replicate reality but to build an object about a feeling, to capture something, which is abstract.

Laurel relates this to her ideas of the use of dramatic representation in computer design. Nelson's concept relies on cause and effect to create an image, where objects

and actions are visualised and the representational object has potential for action, which the viewer may activate. This was the process I followed when I built my installation *Exorcising the Flesh*. The installation focused on my desire for the interaction to be as physical as possible, through the energy expended by the viewer in running on the running machine. This activated different animations, so any calories shed while the viewer ran would be reconstituted by my imagination and the computer into calorie objects, thus exploring the idea of visualising something out of nothing, rather than making a representation of what already exists. The whole thing is a fiction, which examines the experience of distorted body image. A heightened awareness of my body through the lack of tactile sensation when working with a computer led me to construct *Laptopdog*. This piece dealt with my frustrations as a computer user; the first piece was built for a computer programmer. I made a fur coat for his laptop and built a series of VRML models for him to explore. The models were all interlinked with no beginning or end the experience was intimate and hot, this was not a 'user friendly' environment (fig. 30).

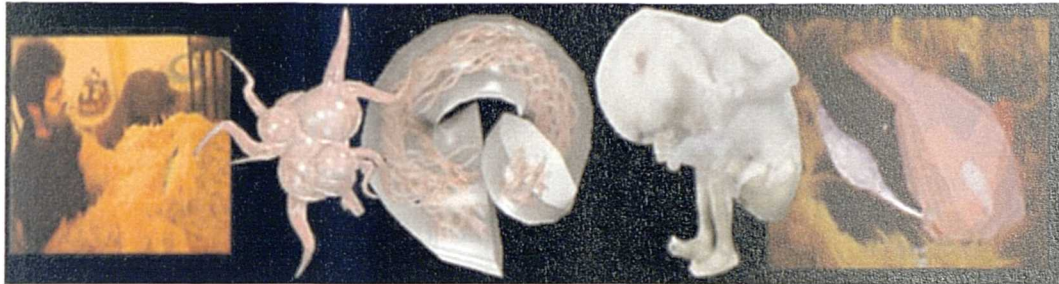


fig. 30 Kate Allen, *Laptopdog*, 1999. Fur covered laptop with 3D models, which can be explored by moving the computer mouse buried in fur. Built with 3D Studio Max, exporting to VRML. Concerns loss of physicality in virtual environment, promises of virtual sex, genetic engineering, frustrations of user interfaces.

Interview Analysis 5: Interactivity

I asked the interviewees for their view of interactivity, as this is one of the major attractions for sculptors to become involved with computers. I was interested to know how much control they thought the viewer should have over the work.

For Jane Prophet, interactivity is a major element of her work, although the level of interaction has been very varied. In the collaborative work *TechnoSphere*, users can construct their own creatures from various body parts; the type of body parts determine whether the creature will be a carnivore or herbivore etc. Once the beast is made, it is given a name and joins all the others made by other users in the *TechnoSphere*. The beasts eat, mate give birth and kill, the user is informed of their beast's progress by e-mail. In the digital ecology of *TechnoSphere* the user directly affects the project through their interactivity. This work is purely Internet-based so the audience interactivity is limited to a familiar screen-based format.

Prophet has made two pieces that bring computers and physical objects together, and here the problems encountered with interactivity were much more of a challenge. Prophet felt that *Swarm* (www.ucl.ac.uk/slade/swarm/) was much more successful than her installation *Sarcophagus* (1997). She cites the most difficult aspect of interactivity as trying to second-guess how visitors will respond and interact with the work. With *Swarm*, sensors in the floor activated projections of a swarm of bees, depending how many people were on the floor the bees multiplied and followed the viewer. Prophet found that the audience immediately engaged with this interface.

Prophet described with her next piece *Sarcophagus*, (a cast resin body with projections showing computer animations) that she attempted to make interaction subtler. "With *Sarcophagus* the sensing is subtle, much less point and click, cause and effect, more somewhere in between; some people hate that, others really like it." She found this subtle form of interaction met with resistance from some of the audience. Some people wanted a more obvious event to happen when they touched the body, but some people did appreciate the ambiguity of the work. She describes the relief of some people that the piece was not "jumping up and down, going look at me I'm an interactive digital art work!" I can relate to her desire to create a subtle form of interactivity, I have experienced many disappointing interactive works, and was not really satisfied with my own attempts *Exorcising the Flesh* or *Safety Net*. This dissatisfaction may relate to different expectations. The idea that digital media should be designed to be coherent and transparent is at odds with the desires of many artists who strive to create work that is ambiguous, questioning, unsettling and difficult.

In 1996, Beryl Graham curated the exhibition *Serious Games*.⁴⁹ Its subject was specifically interaction. In the catalogue essay she mentions the core elements of interactivity being conversation, choice, control and to engage physically as well as mentally with an artwork. Her essay ends by saying that the exhibition probably raises

more questions than it does answers. Another essay in the catalogue by Regina Cornwall⁵⁰ warns that interactive work, perhaps because of its links with computer games and because it requires some kind of rapport with the audience, aims only to please and be fun and does not attempt to disturb or cause an audience to think.

As part of the audience visiting the exhibition *Serious Games*, I experienced many of the problems already noted in the catalogue. My main feeling was one of frustration, as the interactive nature of many of the works depended on how much control the artist or the technology gives you, and often the technology seemed more important than the content. The viewer can feel frustrated and confined by the contradiction of being encouraged to think that the audience are directing things, but find that audience control is very limited.

Helen Sloan, the curator, also shares my concerns with interactivity. She quotes artist/programmer Simon Schofield in a paper given at the Lovebytes⁵¹ conference in Sheffield in 1998 that interactive art only really works if the viewer feels like they have made a difference. She makes the point that no work can be totally interactive because true interactivity is creating and making. “Ultimately the artist is in control of the viewer, the artist is manipulating the viewer. I know some people may have problems with that, but that’s what making art is about. Even a painting is trying to evoke some emotion from the viewer”.

She is excited by what she calls “semi-authorship”; for example, the work of Toshio Iwai,⁵² his work *Resonance of 4* (fig. 31), which is an interactive audio-visual installation which allows four people to create a piece of music in co-operation with each other. This work was included in the *Serious Games* exhibition and was very popular with the

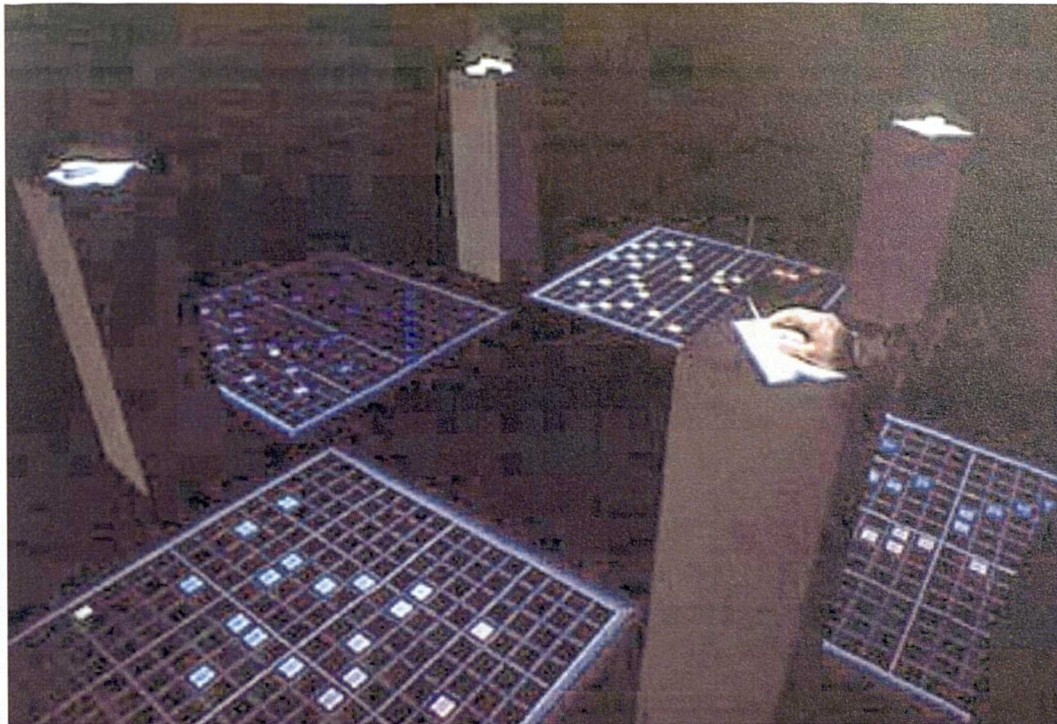


fig. 31 Toshio Iwai, *Resonance of 4*, 1994, 5 computers, 4 computer mice, 4 video projectors, amplifiers, and loud speakers.

audience. She also mentioned the work of Audiorom, which led her to the realisation that she could only think of successful interactive audio/sonic art works and none that were visual, although she did counter this by saying that at the moment the area of audio was where her interests were leading.

Jackie Hatfield cited interactivity with the audience as one of the main reasons she chose to use computers in her work. "The potential for including the audience in a tactile experience, the notion of putting the audience in an active relationship with the artwork, encouraging the audience to be tactile, to effect change in the work". Her work *Distressing the Surface* shown at CADE99⁵³ in Middlesbrough, used touch-screen technology. A sexually dressed woman encouraged the viewer to "touch me, touch me", which made me feel quite uncomfortable, it felt as if as the viewer you being teased, when the screen was touched the image disappeared and returned in another angle. The work made me aware of power games, 'the gaze' and empty promises, but the physical act of touching the screen was somehow rather disappointing, although it did raise issues around the distancing effect of technology.

Andrew Sabin's interest in interaction is highlighted by his interest in e-mail and the web, which he sees as a natural progression from his use of the computer as administrator. He has set up websites to gather public reaction to proposals for public art and regeneration ideas for an area of Birmingham. For Andrew Sabin, the website is "a clean space [within which] to be as mucky as you can be, you could have a real war between residence and students, graffiti artists and police, as much friction as you like without the damage." Andrews Sabin's belief that this Internet is a safe, "no-damage place for interaction" is, I feel, questionable as the Internet space can create its own friction.

David Blandy describes interactivity as deceiving, as it is limited by and controlled by the programmer. He describes the environment as "all sorted out before you get there. It is a safe world where you can have fun. For example in a program such as Photoshop you can do as much as the 'plugins' allow." For David Blandy this parameter-enclosed world may be deceiving, but on his terms it is also attractive, as his love of computer games testify.

Interactivity is a double-edge sword full of possibilities and limitations, deceiving and liberating; it is challenging the way we think of our selves and our audience, but can leave the viewer feeling tricked and frustrated and taken in by digital media hyperbole.

For full interview transcriptions refer to appendices C to H.

Case Study 3: Exorcising the Flesh

Commissioned Installation

Walsall Museum and Art Gallery, 17 September - 31 October 1998

The idea of the installation was to make work built from the calories and flesh discarded through dieting. I also wanted to consider the absurd nature of exercise machines and calorie counting. Any calories expended with this treadmill would be converted into images, which the viewer would see in the mirror in front of them (fig. 32).

I consulted various computer technicians as to how I was going to link the computer to the running machine (what seemed a relatively simple idea to me became fraught with difficulties). Many suggested I should have some software written especially for the piece. I really wanted to keep to off-the-peg software.

I started to regard the software package as the equivalent of the 'ready meal'. Complicated dishes available to all, without being a cordon bleu chef, and with the possibility of alteration and adaptation to my taste.

Liam Birtles, a researcher at Coventry University,⁵⁴ suggested I try to use the software program Director to control the computer mouse, and link the running machine



fig. 32 Kate Allen, Exorcising the Flesh, 1998, studio shot during development.

to the animations I had created using 3D Studio. The idea was that the mouse would be attached to the running machine flywheel, which, when someone used the treadmill, would move the mouse. The program, Director controlled the mouse, making it automatically return to the top of the screen. Animations were placed in the program to be triggered depending where the mouse was on the screen. So as the person used the machine, their movement sent the mouse down the screen (fig. 33). If they kept up the movement the same animation would repeat, as they slowed down the mouse would automatically go back to the top of the screen, activating each animation on the way (figs 34).

To gain some ideas of how the images should look I shot some video footage of a friend and I working out to an exercise tape. My film showed up plenty of wobbling flesh, but also as I watched us trying to keep up with the moves on the tape I became aware of how unnatural the movements were and how awkward it made you feel.

When visiting the gym I had noticed how the exercisers seemed lost in the repetition, the process almost becoming some kind of meditation. This thought was further developed through reading a review of a lecture given by Margaret Morse which was sent to via a discussion group I subscribe to on the Internet.⁵⁵

“She’s right at home describing the warped unnatural alignment of the aerobicized body created by counterintuitive, repetitive movements that limit the self-expressive mechanics on the body. By monitoring one’s progress in a mirror, moment to moment, the constant reinforcement of a flat 2D image leads to a kind of depthless, disjointed body – a schizophrenic break with the real.” (Hunt, 1998)



fig. 33 Kate Allen, Exorcising the Flesh, 1998, audience on running machine activating changing animations.

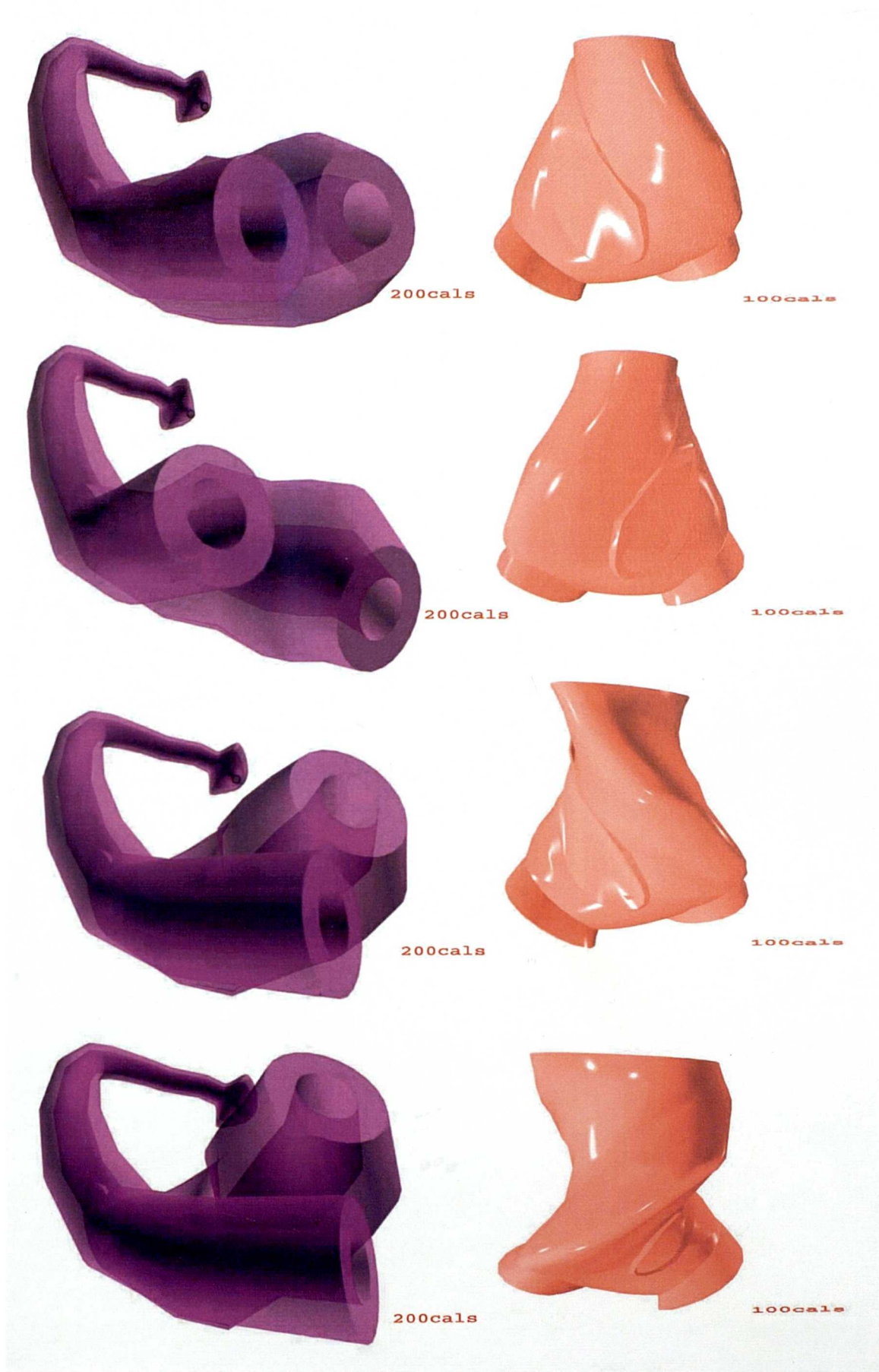


fig. 34a Kate Allen, Exorcising the Flesh, 1998. Stills from calorie animations.



fig. 34 Kate Allen, *Exorcising the Flesh*, 1998. *Stills from calorie animations.*

The idea of repetitious movement leading to detachment and obsessive interest in the image reflected in the mirror flattening our bodies to a 2D image, to be compared with the images on the pages of magazines, began to clarify some ideas. The use of the mirror in the installation became an important part of the levelling of experience. In striving to create an interface which could bridge the virtual image/neurosis with the physical body I used the mirror as the site where all becomes equal. The viewer on the running machine witnesses their flat reflected image alongside the flat reflected computer image (fig. 35).

"In our culture, the look over taste, touch, hearing, has brought about an impoverishment of body relations...the moment the look dominates, the body loses its materiality thus, it is transformed into an image."⁵⁶ (Luce Irigaray)

Through this flatness I hoped that the viewer would get some sense of the artificial and absurd nature of our desires to obtain physical perfection, I also hoped to create a new reality somewhere between the 'real' and 'virtual'.

The importance of repetition in my work has been highlighted through the use of the computer. It is very easy to copy, clone, repeat an action: the act of using the computer can become transfixing through its repetition, and repetition became an important element in my performances creating a sense of ritual and pointing to absurdity.

Exorcising the Flesh was built with the look of a gym, the floor covered in fake wood-panel flooring. I also put together a sound track from various workout records, mostly recorded in the early 80s to set the mood (fig. 36).

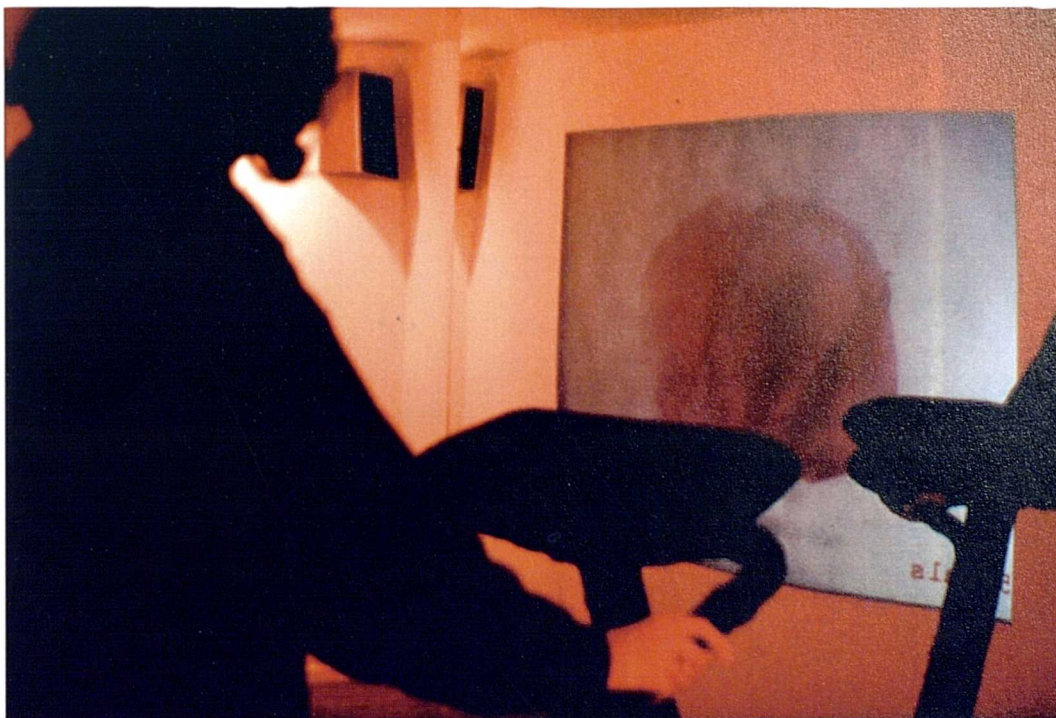


fig. 35 Kate Allen, *Exorcising the Flesh*, 1998.



fig. 36 Kate Allen, *Exorcising the Flesh*, 1998.

In the other half of the gym-like space I built an object which I had imagined as a lump of fat-free fat. This was influenced by my earlier piece, *Have Your Cake and Eat It*, where I had read a report of a product called Olestra, which is a non-digestible substitute for fat, engineered to have no calories (Blackburn, 1996).

I was particularly taken with the idea of fat-free fat as it seemed the ultimate product of a 'depthless' consumer society, to create a food with no nutritional value so we are able to indulge without gaining weight. The other irony of the product was that if you ate too much Olestra it would make your faeces literally run out of your body as it worked by stopping the fat adhering to the lining of the stomach. I began to consider the whole idea of virtual food and wanted to show the absurdity this manipulation, but also make a link to the manipulation by computer of body image in magazines. (As an off-shoot to this I started to construct a VRML model of a stick of celery, in memory of one diet that recommended eating celery as you burn more calories chewing it than you would absorb from eating it. So the computer seemed like the correct habitat for celery, a sort of natural virtual food) (fig. 37).

I began to make the lump of fat-free fat by drawing a mound, or pile, of flesh that would cover the computer and monitor. I wanted to make a floppy, organic looking object, the antithesis of computer shapes and objects, and I wanted this object to submerge the computer (fig. 38). This brought design problems as the computer overheats easily if covered, so I had to construct a wooden shell to fit the whole thing in and then cover that. I used foam and PVC plastic to cover the outside of the wooden frame. I restricted the access to view in and see the screen by creating a very small hole and impregnated the foam with the smell of vanilla. The idea was to make the access to

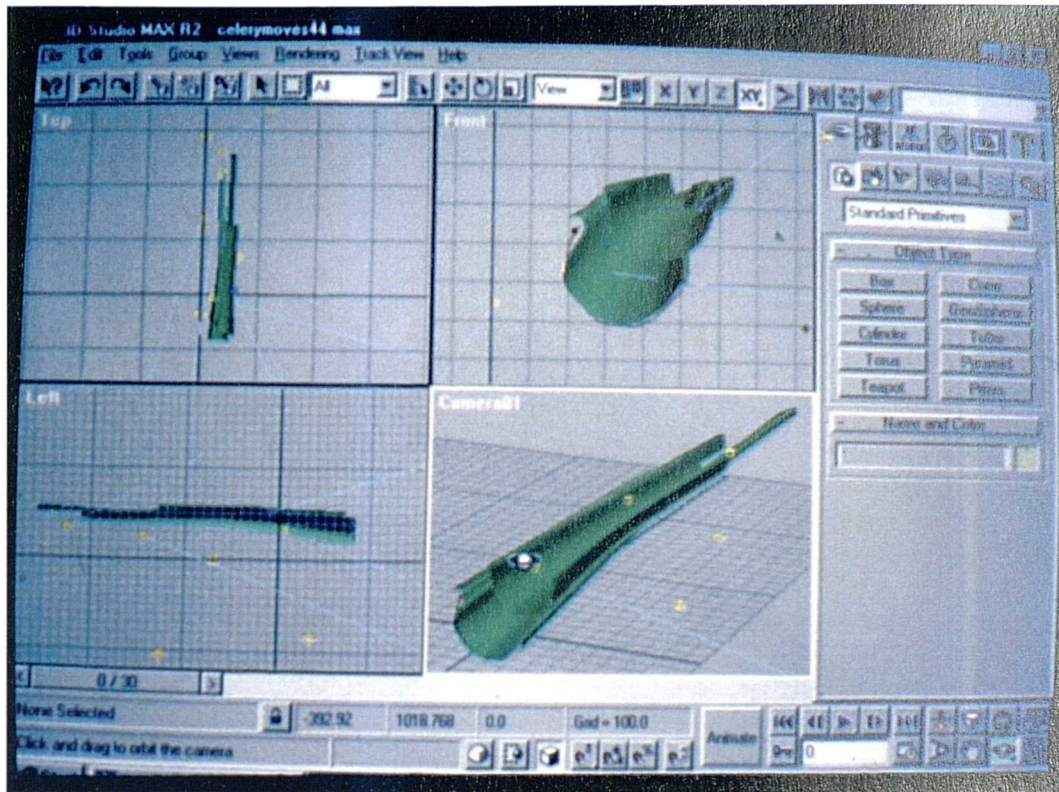


fig. 37 Kate Allen, Virtual Celery, 1998, under construction in 3D Studio.



fig. 38 Kate Allen, Exorcising the Flesh, 1998. Studio shot of lump of Fat-Free Fat.

view the VRML object as awkward as possible. The viewer had to bend over to look through the hole or they could choose to sit on a small pouffe on wheels (fig. 39). The viewer would then have to bury their head into the vanilla-smelling fabric of the lump to move the ball of the trackball mouse, which was placed just under the eyehole, to explore the object inside. I wanted the viewer to feel as if they were physically grappling with the work to try to catch a glimpse of the image inside (fig. 40).

To show inside the *Fat-Free Fat* I built a VRML model, I used the image of computer-modelled pink blancmange, which became a theme through several works. I took the shape of my original three tier dream cake and programmed it to wobble and shake. In the base of it an animated tongue licked the walls of the blancmange, and I constructed cherries to roll down the tongue and back into the mouth of the blancmange (fig. 41).

The only way of viewing the whole of the cake and the tongue would be to manipulate the trackball mouse. I spent a great deal of time trying to work out how much control I could give the viewer to manipulate the VRML object. I was using Cosmo Player to allow the viewer to manipulate the object. Cosmo Player is software browser



fig. 39 Kate Allen, *Exorcising the Flesh*, 1998.
Audience interaction with *Fat-Free Fat*.

fig. 40 Kate Allen, *Exorcising the Flesh*, 1998. Moving
the VRML model inside *Fat-Free Fat*.



which allows you to view a VRML object; the on-screen control panel is similar to a dashboard (fig. 42). With it you can turn objects round, go close up, spin the object around, and travel through the object. It's actually quite hard to control the model and takes practise to become proficient at moving through and around an object. After experimentation I came to the conclusion that I had to limit the movement that Cosmo Player would allow. I did this by setting the program to only examine; the viewer still had some freedom of choice of how to look at the object, but could not go flying uncontrollably through space. This brought with it its own set of technical difficulties, I had to dismantle the rollerball mouse so the viewer could not right-click the mouse and activate other parts of the browser.

The general reaction I had from the public was one of enjoyment and fun, children especially seemed to enjoy the installation, adults being rather more wary and afraid about making a fool of themselves running on the running machine. I think that the work did create moments of tension and confusion between what I wanted the audience to experience and what was actually happening, what was real and what was not. In the comment book someone asked the question, were they actually making the

fig. 41 Kate Allen, Exorcising the Flesh, 1998. VRML model inside Fat-Free Fat blancmange with tongue and cherries.



calories appear or just pushing the arrow up the screen? This, in a way, seemed to sum up my own confusion between what is real and what is not.

“This is one of the most crucial aspects of the development of the new technologies of digital imagery and of the synthetic vision offered by electron optics: the relative fusion/confusion of the factual (or operational) and the virtual; the ascendancy of the ‘reality effect’ over a reality principle already largely contested elsewhere, particularly in physics.”⁵⁷ (Virilio)

With hindsight I did not realise how complicated the use of the computer would be to achieve my ideas and to some extent, the technology controlled the outcome of the piece. My expectations of what I would be able to achieve with the computer were very high. I think I became somewhat overwhelmed with the technicalities of realising the project. In a similar experience to the piece for Jubilee Arts (Case Study 2) I had to rely on an expert using the program Director for part of the work. I have over the last few years, through this research and creating performance pieces, established a method of working with the computer, which mostly satisfies my practice. (Case Study 5).

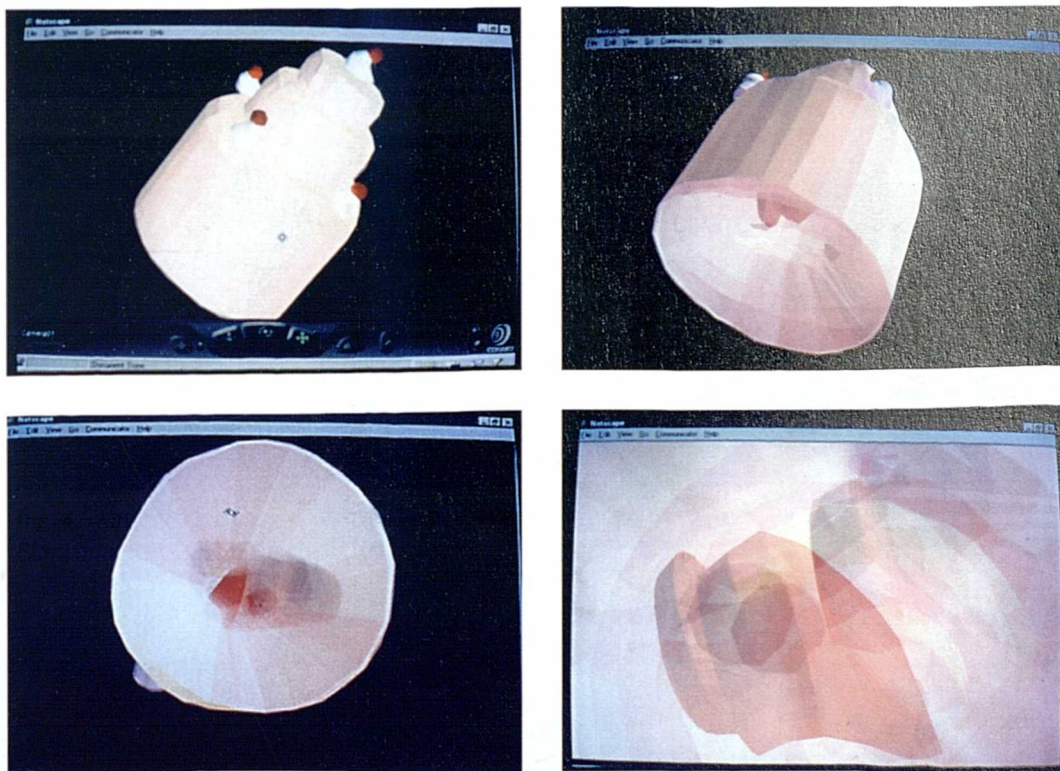


fig. 42 Kate Allen, *Exorcising the Flesh*, 1998. *Cosmo Player Browser* viewing VRML *Blancmange*.

Chapter 5:

Software as Ready-made

In understanding the appropriateness of computer software in art practice, it is necessary to recognise that it is a powerful medium through which comment can be made about image-based capitalist consumer society. Such an understanding could bring us to a position parallel to that which was recognised in the 1930s by Walter Benjamin with regard to photography.⁵⁸ He wrote that the mechanical reproduction of art works resulted in the loss of the original, which he described as reversing the function of art, as it would no longer be based on ritual. The removal of the exclusivity of the art object (the art object freed from what he termed the “aura” of the original) made it available to a mass audience and therefore had the potential to democratise art but at the same time also took away its aesthetic autonomy.

Benjamin uses the example of photography as a medium that has been designed for reproduction and through reproduction loses its uniqueness and becomes a commodity. It has occurred to me that the majority of sculpture I have constructed only exists as a photographic record, as does much of the art I am familiar with through catalogues, rather than experiencing them in the flesh. The representation of the original has become more viewed than the original. So the fact that this thesis has my practice represented by this text and images does seem appropriate. Photography contributes to a culture saturated by images, some commentators predict that gradually all images – from advertisement to artwork will have equivalent dominance within our society. Paul Virilio refers to this as “the industrialisation of vision”.⁵⁹ When using the computer to build objects I have a strong sense of the intangible transient nature of the object, a sense of lack which is never quite removed. At first I found this a problem, but now I have come to appreciate that to deal with this ‘lack’ is one of the main elements the computer has awakened in my practice. The sense of depthlessness, or absence, gave me the opportunity to work with ‘real’ and ‘virtual’ imagery and the possibility that simulations could be read as ‘real’.

Marcel Duchamp showed with his “Ready-mades” that meaning and value are not fixed or embedded within the object. New meanings and values can be created for an object, depending on the context within which it is positioned. In my view, he also removed the sense of “aura” from the object or replaced it with a different “aura”. Duchamp stated that “Art, etymologically speaking, means to ‘make’. Everybody is making, not only artists, in coming centuries there will be making without the noticing”. (Duchamp, 1968, p110)⁶⁰ I equate the idea of ‘noticing’ with Benjamin’s notion of “aura”.

The idea of relocating the meaning of the object was also explored by the Minimalists who aimed, “To relocate the origins of a sculpture’s meaning to the outside, no longer modelling its structure on the privacy of psychological space but on the

public, conventional nature of what might be called cultural space”⁶¹. (Krauss, 1977, p270)

In my struggle to understand the relationship between my object-based practice and using computer software, I returned to consider the work of Duchamp and his “Ready-mades”. The “Ready-mades” were a reaction to living in an age of materialism and a challenge to the traditional means of art production and convention. In trying to clarify the definition of a “Ready-made”, Duchamp compared it to paint: “The tube of paint that an artist uses is not made by the artist; it is made by the manufacturer that makes paints. So the painter is really making a Ready-made when he paints with the manufactured object that is called paints.”⁶² (Duchamp, 1968, p118)

For me, computer software is a type of “Ready-made”. Duchamp categorised his “Ready-mades” as “Assisted Ready-made”, “Rectified Ready-made” or just “Ready-made”. Software allows me to contextualise found images, but I can also view those images in a multi-dimensional space, which was also a preoccupation of Duchamp. Duchamp had a theory that if images in two dimensions were the projections of three-dimensional objects, then three-dimensional objects could be the projections from a fourth dimension.⁶³ He used glass as a medium to suggest weightlessness and to create objects floating in space, as explored in his work *The Bride Stripped Bare By Her Bachelors Even* or *The Large Glass*. Perhaps Duchamp was searching for the depthlessness that software allows me to explore, surface image and simulation in relation to physical objects, creating sculpture where the simulated may become more real than reality. A consideration of Duchamp’s “Ready-mades” has led me to consider my use of software as a critical gesture exploring the controls and conventions of society, rather than as just a substitute for programming.

Just as the metaphysical writer Jorge Luis Borges⁶⁴ builds alternative realities from myths and fantasies through language, I hope to build or point to the building of alternative realities and comment on the corporate surface image and simulation by incorporating the ‘ready-made’ language of software.

Case Study 4: Visualisation for Andrew Sabin

The Open Sea

Computer-Model Visualisation of Installation

Henry Moore Studio, Dean Clough, Halifax, 1997

In 1997 I collaborated with sculptor Andrew Sabin, when he asked me to build a visualisation of his installation *The Open Sea*. The physical installation was to be shown at The Henry Moore Studio, Halifax. The installation was to be a very large-scale metal construction, which Andrew was having difficulty in visualising in conjunction with other objects that were to co-exist in the space. He described verbally how the objects could look, in a vague but descriptive way; “croissanty potato-shaped thing”, and I attempted to build them using the computer program 3D Studio.

The idea for *The Open Sea* was that it would horizontally divide the gallery space into two, with a metal grid cutting through the space (fig. 43). This gave the viewer a unique vision of the objects suspended in the floor by walking underneath them, being on the same level, and looking down on them. The access areas that he wanted to create in the gallery were, for the viewer, similar to the view ports available to a person

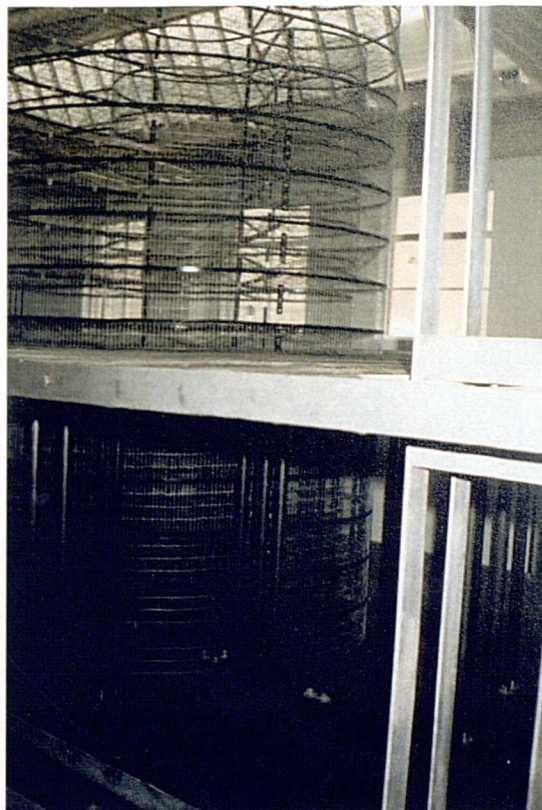


fig. 43 Andrew Sabin, *The Open Sea*, 1997, installation.

using a 3D modelling program such as 3D Studio. I found this very interesting as I often wish I could be in the space that I see on the screen.

I found that building the structure, creating metal poles and wire shapes, worked really well in 3D Studio, I came to realise that creating brand-new metallic objects was a task the computer was ideally suited to (fig. 44).

In relation to this I encountered problems when Andrew asked me to create another series of visualisations for his *C-bin Project*. I created the objects, but the idea of the sea bins is that they gradually fill with objects washed up on to the beach, so the bins would start to go rusty and look old. I found ageing the objects impossible to achieve convincingly and realised that perhaps the computer was not the correct tool to achieve an old, worn look.

Once the physical piece *The Open Sea* had been built, it was surprising how closely it resembled the computer simulation (fig. 45).

Andrew described how he had gained from the computer model a greater awareness of the objects in the space, and particularly the importance of a fence as a marker of that space. It also made him aware of the density of the steel poles, and as a result he

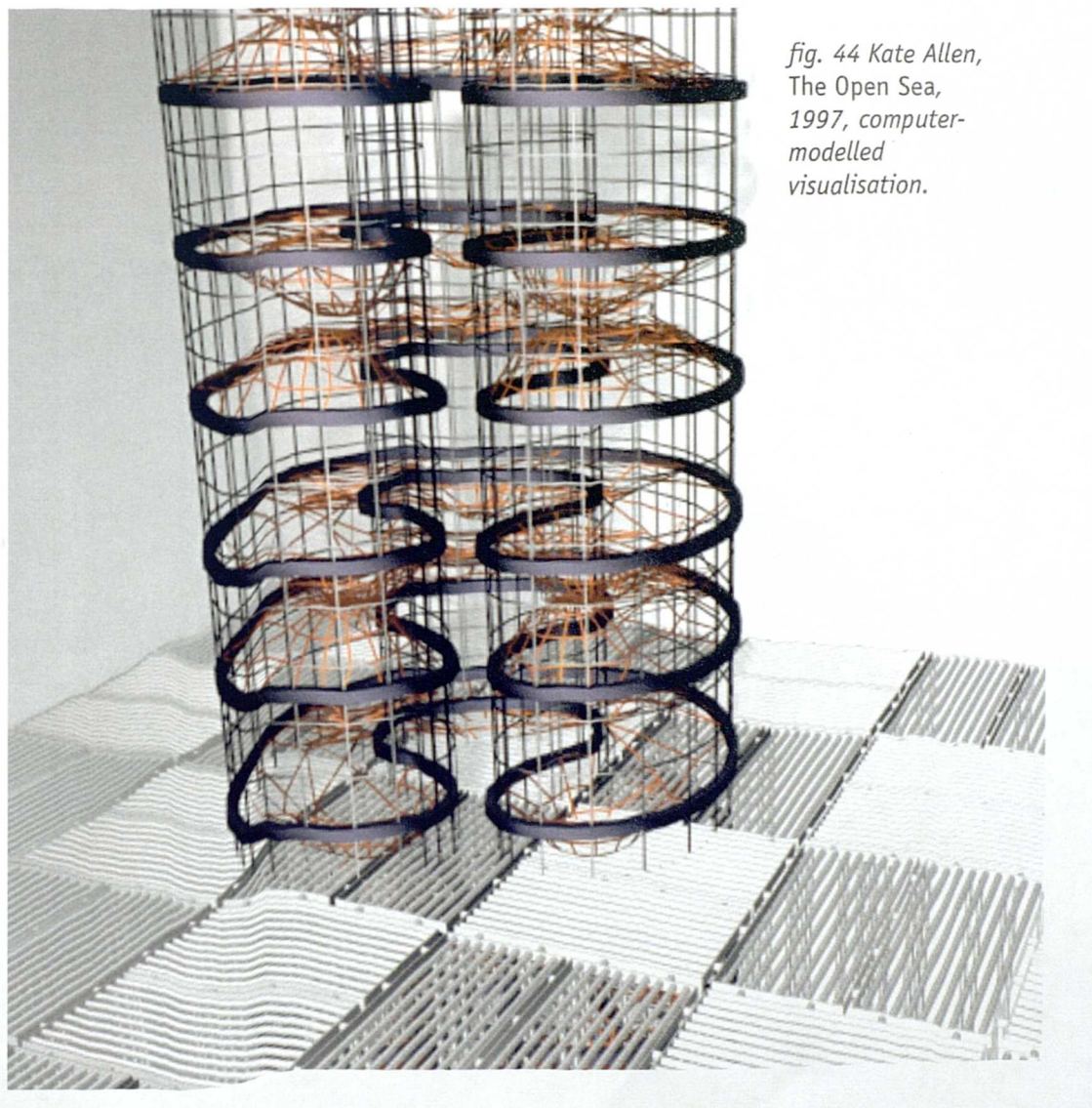


fig. 44 Kate Allen,
The Open Sea,
1997, computer-
modelled
visualisation.

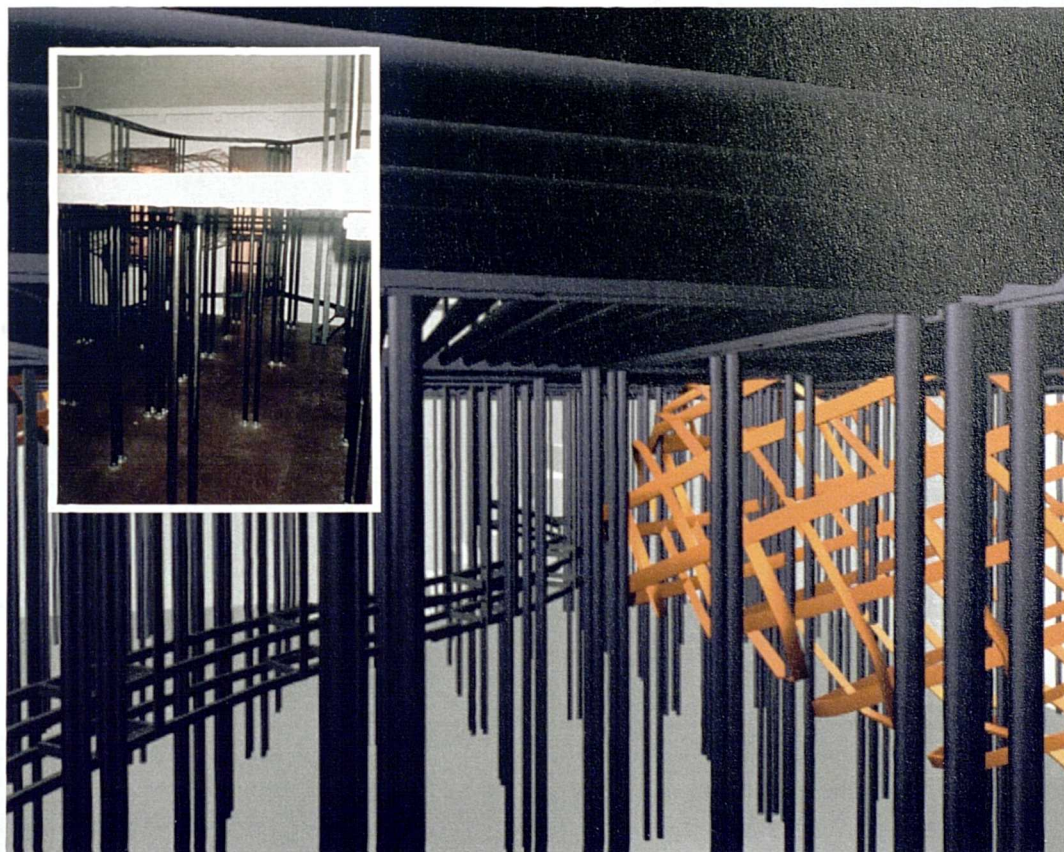
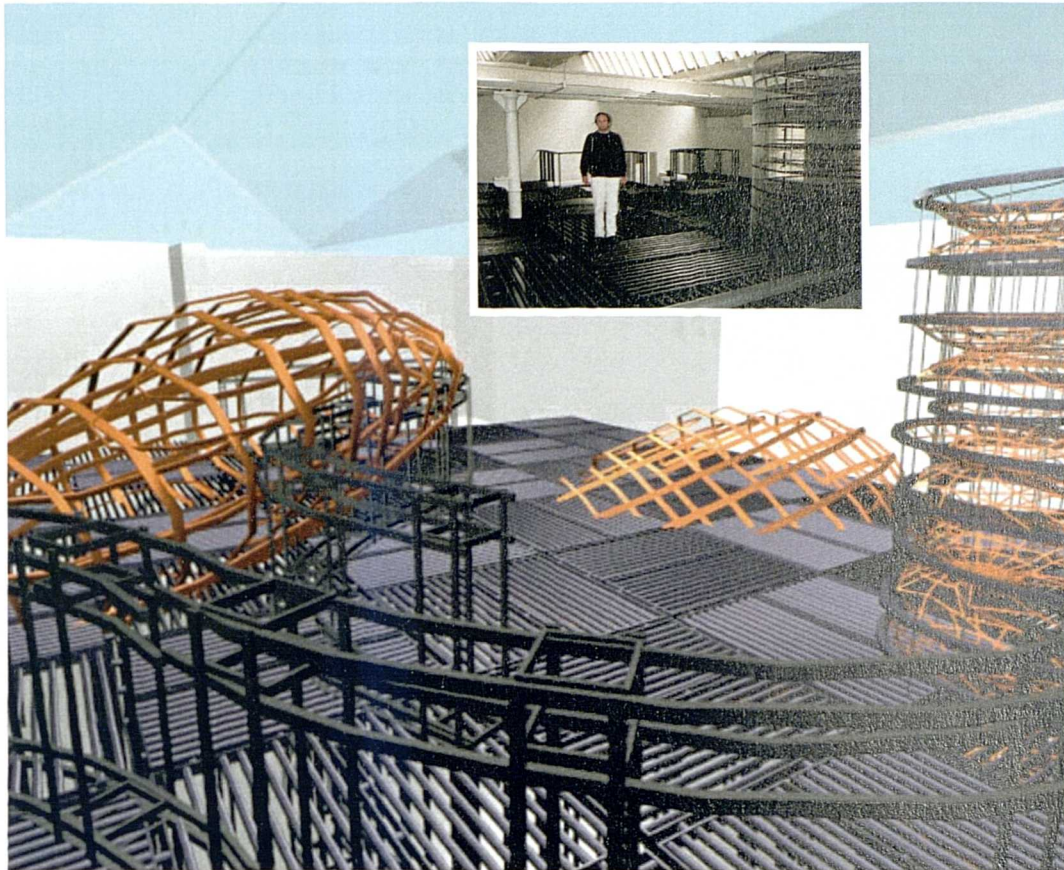


fig. 45 Kate Allen, The Open Sea, 1997, computer-modelled visualisations. Inset photographs of actual installation by Andrew Sabin.

cut down on the number of the objects in the space. The computer visualisation became important in the composition of the objects. He was able to view the computer version from different angles, which were similar to those that would be available to the viewer in the finished piece, something he found impossible to achieve through drawing. So the computer model acted as a guide for the sculptor. One of the most interesting points about making the model was Andrew's reaction to it. This manifested itself in an event at a talk given by the artist and a panel, which was billed as a discussion to explore the process of building the piece. However, Andrew did not include any reference to the building of the computer model as part of this process. I have questioned Andrew about his reluctance to explain this. The following extract is taken from my interview with Andrew, which I have decided to repeat verbatim here:

K.A. There seemed to be a bit of reluctance on your behalf to recognise the role of computer-model-making in a discussion exploring the process of building *The Open Sea*. Why was this?

A.S. [After a very long pause] Well the first thing, I shall come at it from another angle, the physical and spatial experience of the installation is completely other than the experience of looking at the drawing. The drawings are extremely recognisable as being of and having the character of the work. I suppose one could say that if all the decisions could have been made by going through the computer-modelling techniques and endeavours that we went through, giving some or most of the answers there, why go ahead and do the work?

K.A. You mean why build the object?

A.S. What I'm saying is that you were handling an extremely powerful tool (3D Studio) with which one could make many of the decisions one might have to go through to produce *The Open Sea*. We can try this wire model here, this height of floor here, this kind of light, and after a while we got close to what I had in my mind. And yet what is missing? I don't know if you agree but the palpable experience of being in that space is completely other than looking at an animation on the screen and yet the two are clearly visually closely linked. I suppose I am protective of the decision making in actuality because it is hideously hard work and all that is maintaining it is a conviction that the result will be different from the drawing. The better that drawing is, the nearer one is to saying let's just do the drawing and not bother with making it.

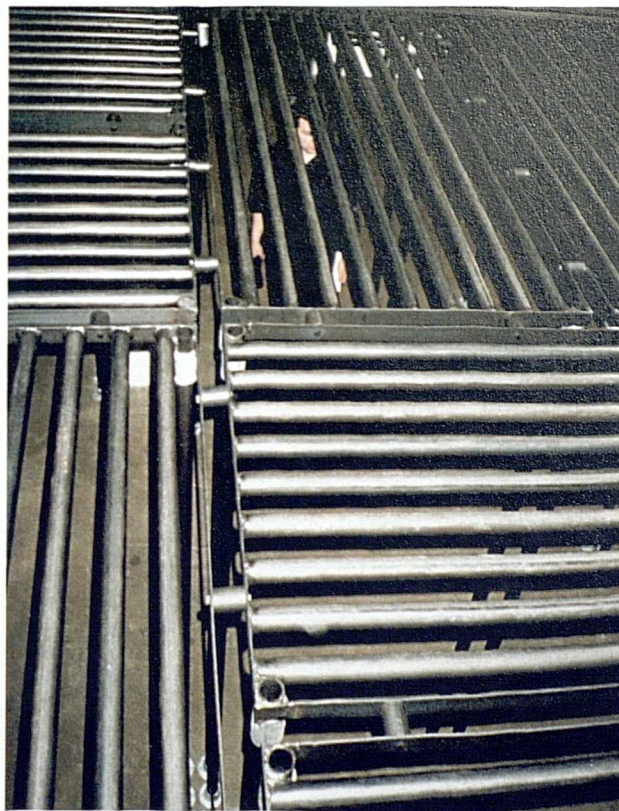
K.A. That is interesting because when I wrote about it in my diary at the time I did pose the question myself. If I could have built it as a virtual model, was there any point in physically making it? But to me there is a totally different reason to physically build the work relating to sensual experience. There is something annoying about the computer in that it could take away the creative struggle. It can never recreate the real thing but makes a good job at looking realistic.

A.S. I couldn't say that it didn't annoy me that the finished result that came long after the drawings was actually fairly close to the drawings. It did bug me. I also think that one is being lazy, I suppose, and glib because there is no detail in the drawing, there was a massive amount of detail in the thing itself. The finer decisions were probably decisions that I made during construction, the way one thing connected to another were decisions I had pored over longer than any other.

K.A. I find intriguing that you're so protective about it, because ultimately all it did was provide one viewpoint of what you did and that was it. It would be like saying, well, now I've seen a picture of you, I don't need to bother meeting you. A computer model can never give you all the realities of life. I find it really intriguing how upset you have become.

A.S. Well I feel it is always easier not to do something than to do it. Somehow one has to crank up one's desires, one's rage, whatever and make oneself do these things. And I also have to expose anything that threatens that momentum to my rage or else it's easier for me not to bother.

Andrew was worried that the 3D model was so like the real installation that it removed the reason for constructing the work physically. I experienced the physical presence of the final piece, which was very strong, as I walked on the open metal grilles they made me feel seasick (fig. 46). The sound and feel of the metal was also an exciting part of the



*fig. 46 Andrew Sabin,
The Open Sea, 1997,
detail showing grilles.*

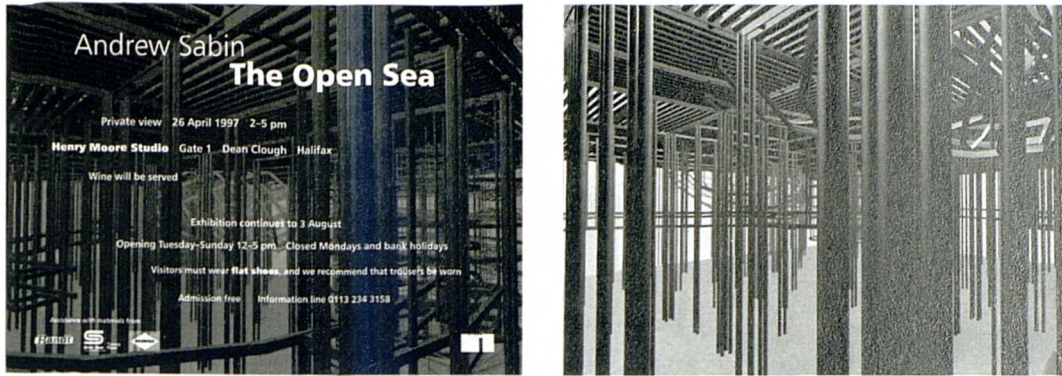


fig. 47 Andrew Sabin, *The Open Sea*, 1997. Private-view invitation card showing digital visualisations.

piece echoing and reverberating. The realised work in the gallery was therefore very much about materiality and the experience of different substances in space, and how they related to me immersed in that environment.

An experienced sculptor such as Andrew realised that the physical experience was something no computer drawing could give, so what really lay at the heart of him denying the use of the computer in the process?

I think it may lie in what is left in memory after the piece has been dismantled. When I made my installation/performance *Have Your Cake and Eat It* I became aware that although the physical cake had the greater impact during the tea party as we ate it, it was the computer image that remained strongest in the memory and which was reproduced most often.

Andrew had mentioned earlier in the interview that one of the reasons he was interested in using the computer was that it gave work an air of authority, “the gloss that the computer can give an image”, he had noticed how seductive the image could be. Andrew used the computer drawings for the private-view invitation card (fig. 47) but only because, due to printing deadlines, the work had still yet to be built. In the catalogue he used photographs of the finished installation. I feel he was worried that the computer image and the record of the real piece would somehow get merged in time. Apart from the few weeks during which the viewer could actually experience the work, the preliminary computer drawings and the photographic record of the piece became very similar as a record of his ideas. Andrew also mentioned that he found the computer drawings not only annoying for being so like the final installation, but he thought them glib and lazy because they did not have the detail of the real piece. Andrew had to spend a great deal of time thinking about design problems, how would all the metal pieces join together. Although the computer image looked very like the physical image, I did not have to deal with the details of construction. To create all the metal fixings would have made the computer files very big and wasn’t necessary for visualising the work, also I did not have to deal with issues such as gravity, and health and safety etc. I just concentrated on how the piece looked generally, not dealing with design problems that Andrew had to consider in making the piece. Andrew felt uncomfortable with the digital images visualising his idea, because when the digital image was made the physical installation had not been built. When asking me to make the drawings Andrew did

not expect them to be so close to the finished piece. Plato wrote that art or appearance could never merge with reality, where even the best imitation of nature is a fake, whereas Aristotle thought art wasn't a question of authenticity but of precision, how exact the imitation is.⁶⁵ The development of the computer creating perfect mathematical models of reality allowed software packages like 3D Studio to give me the possibility to create a simulation of Andrew's ideas. This simulation could be accepted as real, or as a mathematical model of the real, a new kind of representation, not like a photographic recording of what Andrew had already constructed.

Chapter 6: Between Modernism and Postmodernism

Consideration of context leads me to place my own practice in a place between Modernism and Postmodernism. My practice has grown out of a modernist training and the absorption of its ideals, but my work is Postmodern in development and outlook. Through Modernism I was taught to aspire to the idea that there is ‘something’ that the artist invokes (truth, beauty, etc.) through the construction of an art object. Additionally, I was taught that decoration is unnecessary and to subscribe to the Constructivist notion of “truth to materials”. Brancusi’s belief that “what is real is not the external form but the essence of things”⁶⁶ was an almost mystical vision. Modernism grew out of a reaction against Classicism, with an emphasis on experimentation and the discovery of an “inner truth”. The artwork as a metaphor for the psychological interior and physical exterior of the artist, the generation of meaning arising from the artist’s private centred self, are two of the main points of the search within Modernism to find inner “truth” or “spirit” behind the surface. I still hanker after this modernist goal, but am interested in contemplating the surface as well. It would be impossible for me to function as a sculptor and ignore the influence of the world around me, as much of my work concerns representation, and comment or appropriation of what is happening now. My practice crosses the divide between Modernism and Postmodernism; it is the product of a sculptural practice which deals with the everyday, removing the distinctions between ‘high’ and ‘low art’ – it uses parody and to some extent is playful. In *Lyotard and Postmodernism* Madan Sarup⁶⁷ describes the central features of Postmodernism in the arts as a description that echoes that of my own practice.⁶⁸ The central features are the removal of the boundary between art and everyday life; producing an art that can be eclectic, parodying and playful.

Rosalind Krauss noted that after 1960 the meanings of artwork follow the principles of semiotics, rather than meaning being inherent in words or objects, and that meanings are produced only through the relationship with other words or objects. Meaning is produced in the public rather than private sphere; it is relative rather than absolute.

Krauss uses the term “Postmodernism” in her 1979 essay *Sculpture in the Expanded Field*⁶⁹ when discussing sculpture after Modernism, which she described as an “historical rupture.” The rupture occurs in the language of Modernist sculpture, the medium and individual practice. “A practice not defined in relation to a given medium – sculpture – but rather in relation to the logical operations on a set of cultural terms, for which any medium – photography, books, lines on walls, mirrors, or sculpture itself – might be used.” (Krauss, 1979)

The expansion of the field we call ‘sculpture’ continues for all of us today with the introduction of digital media into art practice.

Richard Wright⁷⁰ has stated that the very fact that the medium of the computer offers no resistance (apart from learning the program) to the desires of the user may seem overwhelming to us in its boundless potential. In my interviews Andrew Sabin voiced similar concerns: that there is a lack of friction creating art with digital media. This has led me towards an understanding of my desire to retain some Modernist ideals. In a Postmodern world and post-Duchamp, it is hard to control meaning as it is dependent on context, but in the Modernist world the artist creates the meaning, so perhaps I feel I can exert more control there!

Andrew Sabin felt that the friction was lacking in digital art because there was no context in the first place, but I felt that this may be because he had yet to really explore software packages and understand the language.

True to the eclectic nature of Postmodernism, I want a bit of everything – I would like to keep some of the hermetic world of Modernism, carrying as it does a belief that there are some definite truths. Software packages such as 3D Studio allow me to do this, and I can contemplate some kind of mysticism when I explore a VRML model. I wish to build my own closed structures within the freedom of my Postmodern practice and the computer allows me to do this, creating a space where everything is knowable. But paradoxically, at the same time I also desire the possibility of Postmodern slippage. Rosalind Krauss refers to the memory of childhood evoked by Proust triggered by the taste of a madeleine. “Sculpture asks us to experience the present in the way that Proust finds the past: ‘somewhere beyond the reach of the intellect and unmistakably present in some material object’ (or in the sensation which such an object arouses in us)”⁷¹ (Krauss, 1977, p287). Through my sculptural practice I hope I, too, can reach beyond the intellect and find triggers to the ‘inexplicable’ present in some material object or image.

The Power of Suggestion

In an installation/performance piece *Have Your Cake and Eat It*, I used the memory of a childhood cake which I constructed in 3D Studio and then copied to make a physical cake. The importance for me of constructing my memory of a cake as a computer model became particularly relevant for me during the performance. As we ate the real physical cake, the animated computer cake continued spinning intact and perfect, its image seeming more ‘real’ than the cake we had consumed. It helped to preserve the memory of the physical cake, the virtual cake that had been the source now appeared as a remnant. The cake, virtual and real, was for me a sign for childhood loss of innocence and ritual.

To return to loss of aura, when I visualise ‘aura’, the word, I see it as a pond where I can concentrate on the surface of the water rather than the depths. The removal of the meaning from centre to surface, is where the digital image exists for me. At first I worried that the digital image lacked depth or meaning but perhaps the digital image can offer meaning from a different perspective? Throughout my practice, I am dealing with a paradox, the contradiction of Modernist object and Postmodern surface. Frederic Jameson describes the signifier that has lost its signified as transformed into an image (Jameson, 1983, p120).⁷² Perhaps the images that capitalist culture bombards us with have not lost meaning but have reached a point of saturation for our interest or atten-

tion. Many of these images tend to be standardised, corporate and stereotypical. Paul Virilio mentions in *The Vision Machine* that: “in multiplying ‘proofs’ of reality, photography exhausted it.” (Virilio, 1994, p23). Jean Baudrillard argues that consumer objects “constitute a system of (semiotic) signs that differentiate the population”. Products are bought often not because of need, but because of desire to fit into the social order or define personal identity. He describes these consumer objects and images as “‘floating signifiers’ that are inexhaustible in their ability to incite desire.”⁷³ (Baudrillard, 1994, p136) Desire is the fundamental drive of our capitalist culture and the effects of this desire are the main influence on my practice. I am intrigued with the power that images of capitalism have to capture our imagination – that if we buy the product, have the ‘look’, we will be transformed into an object of envy for others – encouraging narcissism. I seem caught in a cycle of insatiable promise or faith that if only I had this product or looked a certain way I would achieve happiness and contentment. Images fuelling this desire refer to the past and describe the future but they don’t often deal with the present, as the unobtainable is the most desirable. Computer software enables creation of image simulations, which, because of the quality of computer imagery, look ‘real’. I hoped through the use of computer images to infiltrate and subvert messages of desire. My idea is to use images to create something ‘real’ or ‘physical’ in the same way that the psychosomatic can produce symptoms or a placebo can work through belief or faith. I hoped to harness the power of our desire fuelled by mass-media images to create a sculptural work from desire – my piece *Have Your Cake and Eat It* could be seen as an example of this. The virtual cake examines the power of suggestion, changing the relationship of the viewer to the physical cake. The viewer, when exploring the virtual cake, (made using VRML); discovers pubic hair and tongues licking the cake from inside out; the audience experience this disgusting image while consuming the physical cake. I hope that their confidence in the contents of the physical cake is questioned and that the piece provokes issues surrounding the effects of being given too much information, as well as highlighting the power of suggestion. Shakespeare uses the metaphor of a spider in a cup in *Winters Tale* to express Leontes’s⁷⁴ horror as he imagines (wrongly) that his wife is having an affair. The play is a powerful example of how a jealous mind can interpret innocence as guilt and the terrible consequences of that jealous imagination. My installation *Exorcising the Flesh* attempts to construct objects inspired from calories, while in pursuit of the perfect-looking body, my performance *Little Death* deals with female orgasmic desire at odds with the male construction of ‘perfect woman’.

Minimalism led to the shift of meaning away from the object and evolved into a dematerialization of the object in Postmodernism. I imagine the opposite, that an object can be ‘materialised’ through computer image simulation. Emphasising surface rather than depth, the transformation of reality into images and signs, leads me to the possibility of reversing the transformation to construct images from our desires that become reality.

Case Study 5: Performance

Lara Croft presented as part of *Gamut* an exhibition to accompany *CADE99* conference, Cleveland Gallery, University of Teeside, 7 April 1999

Catherine Real, Wysing Arts Gallery, Cambridge, 27 November 1999

Little Death, White Cube Gallery, University of Bath, 31 January 2000

Little Death, Lecture Theatre, Goldsmiths University, London, 17 March 2000

These performance works gave me the opportunity to develop my ideas of 'virtual' image and the 'real' object, through projecting various virtual models onto a physical dummy sitting on my lap, layering the physical object with the virtual projection. I perform with, a Lara Croft 'lookalike' dummy,⁷⁵ in a long white dress; she sits on my lap, my arm through her sleeve, so to the viewer it looks as if her arm is moving (fig.48).

For the piece at Wysing Arts Gallery, *Catherine Real*, I built a computer model of an empty dress, the shell of a traditionally dressed woman, the archetypal fairy-tale dress, bridal, virginal white, long and full, the arms outstretched (fig.49). Set inside the dress is a spinning red spiral/Catherine Wheel, the mouth of which is chased by sperm like shapes, which as they move resemble the flames of a fire. Poking from the mouth of the



fig. 48 Kate Allen, *Little Death*, 2000, Goldsmiths University, London.

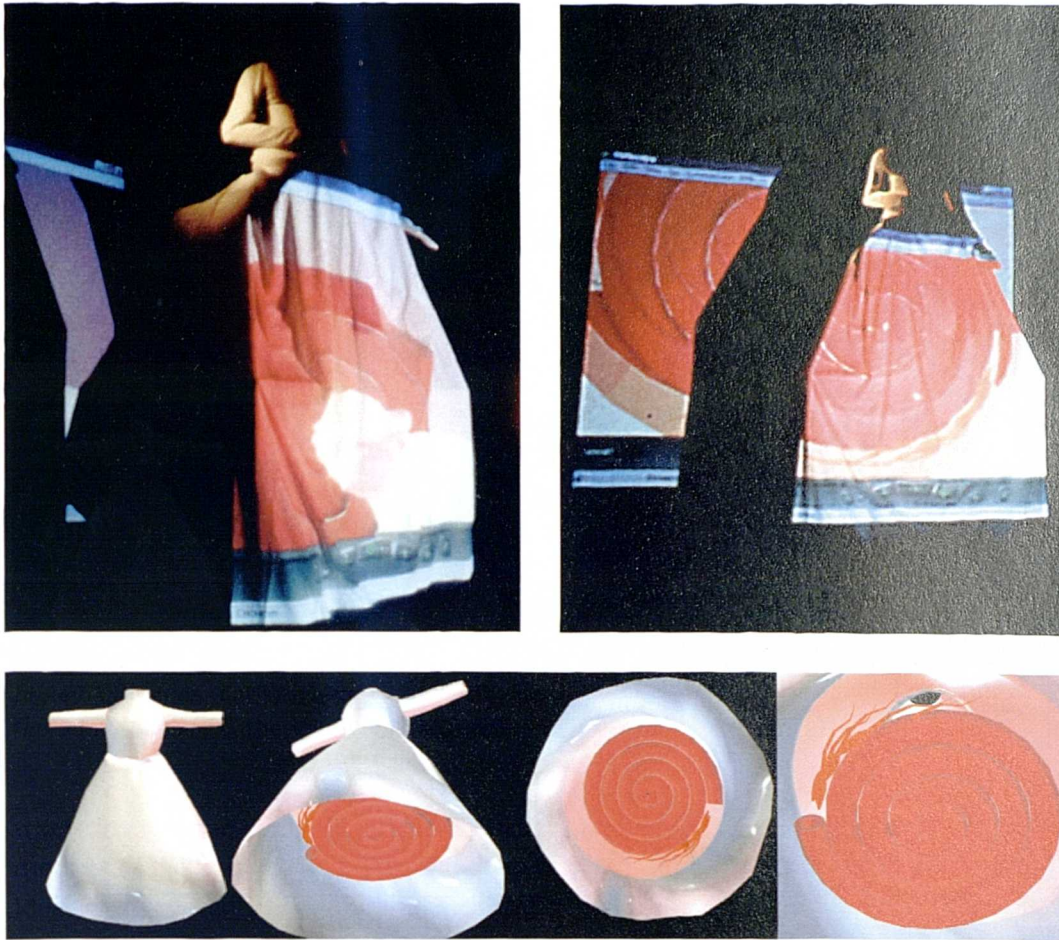


fig. 49 Kate Allen, Catherine Real, 2000, Wysing Arts Gallery, Cambridge.

fig. 50 Kate Allen, Catherine Real, 2000, stills from animated VRML model.

wheel is a tongue, which attempts to lick the sperm/flames. My inspiration for the model was taken from the firework named the Catherine Wheel after St Catherine, the idea of it repeatedly spinning and burning its self out. Nothing is produced from this action; it is wasted energy, to be enjoyed for a brief moment, then finished. I thought the process similar to the female orgasm, as the female orgasm is not linked to conceiving, but merely for the enjoyment of the woman (fig. 50). The model of the white dress represented perfection and saintliness, to be able to bury the Catherine Wheel inside the dress was important in conveying my ideas concerning the paradox of beauty, real and virtual. The repetitious nature of the performance added to the ritualistic element of the piece

The Dummy

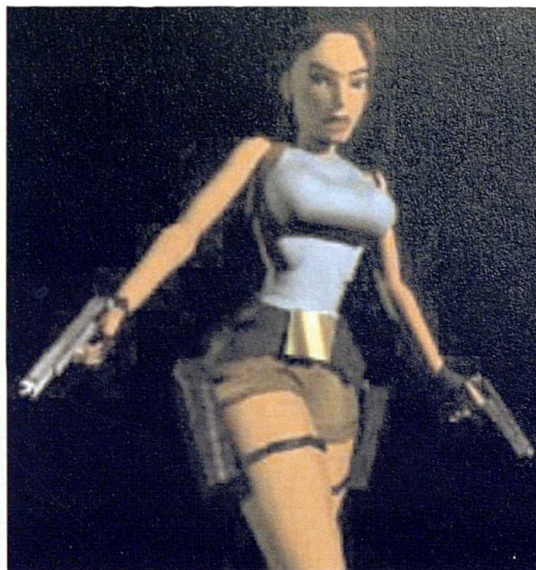
Using the idea of a ventriloquist dummy rather than a doll was important. The ventriloquist makes the sound seem to come from the dummy and the ventriloquist can hide behind the dummy. I felt I had more confidence in performing with the dummy sat in front of me than if I sat there alone. I saw a link between this relationship and the user of a software package; the software gave me the confidence to use the computer where if I had to program I would not have attempted using computers as part of my work.

The role of who has control has been a constant issue when building work incorporating software; is the programmer like a ventriloquist allowing me to produce my work but in their voice rather than my own? Here is the paradox of using software, software controls you and can confine you, as well as allowing access to programming skills. Computer games are programmed to make you feel you have control or free will over the game (just like interactive art works), but this is confined to the amount of freedom the programmer allows you to have.

The dummy masks the ventriloquist movements; the ventriloquist hides behind the dummy character, the human and the inanimate object are merged. But the relationship is not relaxed, it is difficult to control, as is my relationship to the computer and commercial software and the corporate image. In the performance I use a piece of software downloaded from the Internet called Cosmo Player. This is a browser enabling the user to look at a VRML model. It consists of a dashboard of directional controls. The browser is quite difficult to get used to, and I found it similar to learning how to park a car in the real world. The awkwardness and frustrations of directional control of the model are linked in the performance to sexual exploration, and digital exploration. Through the use of the sound track directing the hand to move left and right etc. on the trackball mouse, the VRML model acts as a metaphor for sexual satisfaction.

Virtual Role Models

Pursuing my interest in examples of Hyperreality⁷⁶ where the simulation of the real could take the place of the real, these performances examine an idea of virtual female role models. The success of the character Lara Croft from *Tomb Raider* (fig. 51) (which I regard as a typical male fantasy figure, built by a male programmer to be commanded by the [mostly male] game players) led to a search for a real woman to play Lara in a film and promote various products. It proved difficult to find women with the same proportions as Lara, as the computer model is an extreme idealisation of female form. Lara became a sex icon (fig. 52), her sexual desirability discussed as if she were real

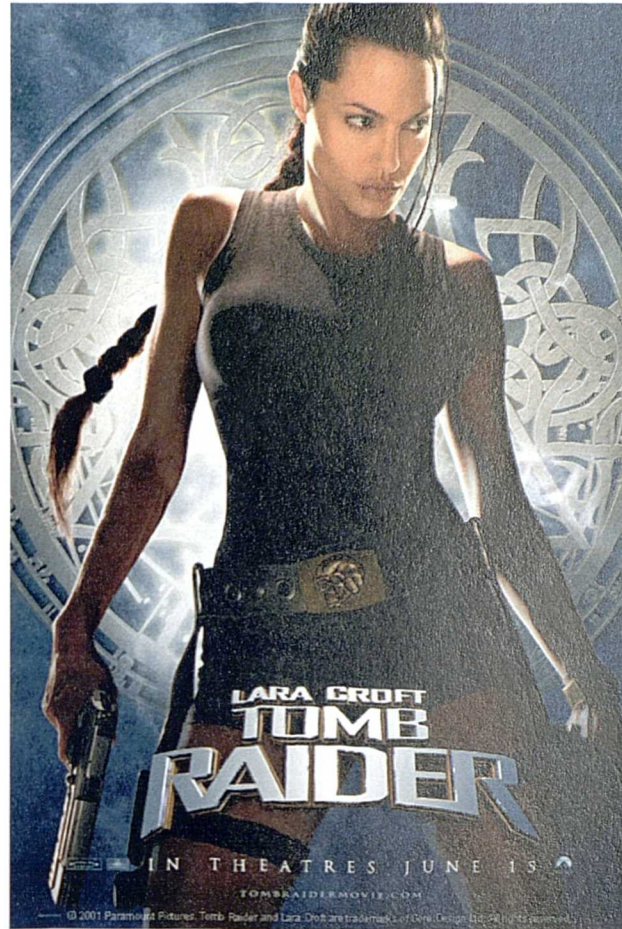


*fig. 51 Lara Croft,
original computer
game image.*



fig. 52 Lara Croft computer porn image.

fig. 53 Lara Croft as human.



long before portrayed on screen by Angelina Jolie in 2001⁷⁷ (fig. 53); it is possible to forget that she began her existence as a digital fantasy.

My performance gives Lara the chance to discover her own sexuality. Even on the porn sites⁷⁸ of Lara her clitoris was never modelled, which has nothing to do with keeping the polygon count low.

I became intrigued by virtual role models of women, constructed and controlled by an outside force (e.g. programmers or religion), creating perfect yet virtual women. I made a connection between Lara Croft and St Catherine for a piece made for Wysing Arts Gallery. I was invited to give my performance around the time of Bonfire Night and made the connection via the firework the Catherine Wheel with the legend of St Catherine as a religious model of 'perfection'. According to the version of the legend in *The New Oxford Dictionary*, St Catherine of Alexandria was martyred (died c307) after refusing to recant or marry Roman emperor Maxentius. He tied her on to a wheel of knives to kill her, but she survived, so Maxentius chopped off her head, and in some versions of the legend, such as her purity milk flowed from her neck. St Catherine is seen as perfect as she renounces the flesh for her love of God. During sculpture workshops we developed at Wysing Arts we also followed the story of the Snow Queen.⁷⁹ This fairy tale tells of the perfect beauty of the Snow Queen, who with her heart frozen condemns her suitors to their death. It is only when she falls in love that her heart melts and she becomes mortal. I linked these three characters through their represen-

tation of 'perfection' in woman, examples that women can only obtain perfection outside of the physical body. My performance comments on the impossibility of 'perfection' of the physical. The perfect woman I portray is in a constant state of anticipation and anticlimax searching for an orgasm. It is the collision between the physical woman trying emulate the perfection of a virtual representation, while in my performance the virtual women attempt to discover satisfaction through their bodies, both being impossible to achieve. Perfection is ruined through contact with flesh.

Interactivity and the Audience

The performances have evolved through a gradual change in my desire for interaction, based on my experiences as viewer and creator of digital interactive work. This use of my body, a dummy of a computer character and a VRML object, was my attempt at creating some cohesion between the computer image and the physical object. I found that adding myself to the equation of real and virtual object created a link that was missing with my installation *Exorcising the Flesh*. I heard some of the audience at Wysing Arts Gallery trying to work out if I were real or not.

When observing the audience engaging with an interactive art work, it is often the case that while one or two people engage with the work the majority seem to watch the effects of the interaction of one or two experiencing it. To compensate for this and the fact that as the artist I wanted to direct the viewer to experience everything I had prepared, I decided that I would be the one to interact with the computer while the audience looked on. This removes the possibility of disappointment of the viewer, who often wants more control over an interactive artwork than the artist is prepared or able to give them. In interactive art works expectations are raised but the viewer is often left frustrated and feeling their interactivity is irrelevant. I have noticed the tier system mentioned by Helen Sloan, where you have one or two people controlling the mouse of an interactive artwork while everyone else stands and watches. The hardware of computer interactive pieces often has equipment that can only be used by one or two people at a time. Many viewers are not keen to participate with technology, preferring to stand and watch someone else interact with the piece. As an artist using interactive technology can also be frustrating, as the audience never does what you expect (although I realise this is also one of the advantages). The audience often misses parts of the piece, I found myself wanting to direct people as to how to use the technology, so they would get to see all the things I hoped they would. To become the person engaged in the interaction seemed the logical step to overcome some of these problems. Also, by putting myself on display I hoped to comment on the control over women on display being regarded as images, and in the glare of the computer challenge the non-corporeal nature of the digital image. I wanted the work to be inconclusive and awkward as a reaction to the structured nature of corporate computer image (fig. 54).

Observing Interaction

There was an element of ritual in the piece *Have Your Cake and Eat It*, where I invite the audience to tea and we eat cake as a marker of the introduction of 'virtual objects' into my practice. The latest performance pieces also have a connection with the ceremonial and ritualistic. By placing myself above the audience, like a statue, I become a part of

the image, in the glare of the data projection, and the repetitious search for ecstasy has a quasi-religious quality. When the piece was performed at Goldsmiths, it was held in a lecture theatre so the majority of the audience was captive. This brought a very different feel to the performance as it usually is performed in a gallery where the audience would come and go. The piece repeats itself and I kept up the event for half an hour. I could feel the audience getting restless and uncomfortable wondering when the end would occur and it gave me a strange sense of power, but I also realised I did not know how to stop. The audience watching interaction taking place with the computer gave me the opportunity to take control, but also made me vulnerable, putting myself on display, and questioning our vicarious culture of audience participation through watching passively. I have felt that the performance work has come closest to achieving an examination of our relationship of the 'real' and the 'virtual' through my sculptural practice.



fig. 54 Kate Allen, Little Death, 2000, White Cube Gallery, Bath. Audience view performance.

Chapter 7:

Omnipotence

For me, the capacity of the computer to reduce everything to numbers raises a number of paradoxes. It offers many advantages, equalising all kinds of different information and, in the case of 3D modelling software, it allows the user to have total control in the virtual environment they have built. With no gravity and endless space, it does mean the chance of accident or surprise in the virtual world created is severely limited and that has meant for me there has been a lack of spontaneity, which is something I value when building sculpture. Michael Heim, in his chapter “Erotic Ontology of Cyberspace”,⁸⁰ describes our view of computerised reality as omnipotent: “The computer God’s-eye view robs you of your freedom to be fully human. Knowing that the computer God already knows every nook and cranny deprives you of your freedom to search and discover.” (Heim, 1994, p78) The desire to keep wanting to be surprised by what may occur when making may explain my rejection of both immersive Virtual Reality or Internet environments as a medium and instead, gave me another reason to attempt to mix the real and the virtual. Heim echoes the “Madeleine effect” as described by Krauss, in his elucidation of the desire to keep a sense of the unknown. I have found a method of keeping that sense of discovery through exporting models made in 3D Studio into VRML, which I have used in the construction of another version of *Have Your Cake and Eat It*.

The VRML model of a cake projected on to a real physical cake allows participants to explore the interior of the virtual cake. This new environment: the ‘inside’ of the virtual cake, ‘inside’ the icing, ‘inside’ the glacé cherry, allows the viewer to travel through a digital arctic landscape of the virtual cake as they eat the physical cake. The interior of the cake is an unknown to me while building the model, until I use the VRML player, then I can move through the computer modelled cake and explore the landscape.

Deciding to work between the ‘real’ and the ‘virtual’ led me to consider Baudrillard’s ideas of simulacra and simulation. He describes us as now living in the third order of simulacrum,⁸¹ a consumer society caught up in the play of images, which has less and less relationship with the outside or an external reality. The image or signifier has replaced the object or experience.

Baudrillard takes the idea to its logical – if extreme – conclusion to describe a world in which all we have are simulations that have no original to be copied. Computer software can create both the image of an existing object and simulation where there is no original. Juxtaposed with physical objects, I attempt to balance the effects of living in the sign-laden depthless culture of consumer capitalism by creating sculpture which utilises and comments on the power and importance of our desires, and their effect in relation to the real and the virtual.

Central to my approach is a desire not to replace the real world with a digital world, rather to make work that explores ‘the world’ plus its signs – the idea of theatre, as

detailed by Roland Barthes contextualises my approach: “the spectator is by turns required to decode a set of symbols and confronted with immediate reality he encounters a super-reality, not signs instead of the world, but the world plus its signs” (Moriarty, 1994, p272).⁸²

Conclusion

This research has attempted to give insight and find a voice for practitioners to investigate the implications that the role of new digital media has to play in the development of sculptural practice in Postmodern culture.

Through this research I have explored some of the problems and possibilities of adding digital media to my sculptural practice, balanced by interviews with practitioners dealing with similar issues. The research articulates what a Postmodernist artistic practice might look like and what areas of Modernism it challenges e.g. the role of author/artist, control by the artist, the position of the audience and interaction. The research has been written with other practitioners in mind and intends to be an open ended, reflective journey of discovery, showing evidence of the struggle of transition from one set of values to another.

Project by project and through discussion with other practitioners, this research has uncovered areas of discomfort and contradiction as well as the implications for new skills and new rationales for implementing them.

In this conclusion I have broken down matters arising through the research into five different areas in an attempt to gain clarity over the research as a whole. All five points interconnect and none supply a definite solution, they are where the journey has taken me so far and indicate routes for others further future research.

Modernist, Postmodernist, Real and Virtual

My research has followed challenges to my practice from my Modernist training to a Postmodern practice and my dilemmas of wanting to have a share of both the Modernist creation of meaning behind or within an object and the possibility for Postmodern slippage.

At the beginning of this research project I wanted to concentrate on a particular idea of sculptural practice which at the time I described as 'the space between the actual and the virtual.' This had been inspired by a number of issues: the possibilities offered by computers to create virtual objects and virtual worlds and a desire to reflect on image-saturated capitalist culture, where it seems increasingly difficult to distinguish the 'real' from the 'virtual'.

As Rosalind Krauss noted, Postmodernism has led to a practice not defined in relation to a particular sculptural medium but reacting to a set of cultural terms for which any medium might be used.

Software reflects the terms of Postmodern culture and I have come to regard the software package as a type of Ready-made. Paradoxically, using software allows me to submit to the equalising process of the computer (Virilios Vision Machine) creating more images for an already image saturated capitalist culture.

While lecturing in London in March 2000, Baudrillard lamented the loss of magic in art; Baudrillard described the loss of magic as the result of the universe having fallen into a banal reality in an age of technical explanation, the universe as given up to us

readymade, like Duchamps Urinal. For him, art has no answer to this: “it can only rehearse the disaster”. Baudrillard goes on (with tongue in cheek) to add that “To turn an object into art you just have to make it useless. But the idea of uselessness is itself useless. Today we merely enjoy the idea of art, not art itself.” Baudrillard gives the reason for this problem as image feedback. The image masks itself with an idea of itself, constantly transforming itself into a message and thus prevents us from seeing. I found this an interesting indictment of the power of advertising, but also I was surprised that Baudrillard’s way of dealing with the problem of ‘image feedback’ is to take up photography and possibly start a career as an artist! Could Baudrillard be reacting against “an art whose imagery appears depthless”⁸⁶ by creating yet more imagery?

Baudrillard states that he may become an artist in his seventies because he hopes that by using photography he maybe able to create images that could “break the screen” He feels that photography, if it avoids being assimilated to a message, can be unintelligible: the opposite of thinking. The potential for “something that is neither true nor real, but is beautiful”

I found Baudrillard’s desire for the “unintelligible” similar to the Modernist need for some kind of mystery, which I hope to preserve in my Postmodern practice. I realise now that my search for spirit, mystery or beauty ideals absorbed through my Modernist training may be in reaction to the corporate controlled images that surround me.

Exploring the relationship between the ‘real’ and the ‘virtual’ I considered the potential for creating simulations that could be mistaken for reality. As Jane Prophet points out, the power of human suggestion and human imagination has learnt to guide us to other places via pictorial representation or sensory suggestion. She considers it the downfall of commercial Virtual Reality that it has not caught on to this and prefers to obsess over simulation rather than expression or abstraction.

The digital image provides a form of mathematical representation where I can create visualisations of objects yet to be made or objects that are impossible physically to make. By utilising the seductive ‘look’ of the digital image these representations have an authority, an authenticity, which act as a powerful trigger to the viewer. I linked this with the idea of the power of suggestion and the placebo effect to explore my relationship between ‘real’ and ‘virtual’ (see Case Study 1: Have Your Cake and Eat It, and Case Study 5: Performance.)

As Michael Rush writes in the last chapter of his book *New Media in Late 20th Century Art*⁸⁷ “John Berger⁸⁸ questioned what served in the place of the photograph before the cameras invention. The answer we would expect would be painting or drawing. But Berger says that a more revealing answer might be memory. The photograph does what was previously done with reflection.” Rush then poses the question “what will be the content of memory if we can no longer distinguish simulated events and experiences from ‘real’ ones? Perhaps the merging of ‘the real’ and ‘the virtual’ in art as well as in life will be in the future, what the merging of ‘art’ and ‘the everyday’ has been in the twentieth century.”

The Process of Making and The Role of the Artist

The process of making work and the role of the artist seemed to be challenged through artists' use of new media (Interview Analysis 4: Collaborating Creatively). Digital media is often complex and ever changing, it is hard to build expertise in all its aspects, so the need for collaborations or employing experts is common. But these collaborations are not only about filling a technical gap or artists using others to produce more work as was the tradition in many sculpture studios. I think true collaborative experiences, sharing different thought processes and different approaches towards developing each others' ideas are encouraged by digital media. The computer acts as a mediator and communicator of different information whether it is code, music imagery, ideas, all processed through the computer at best creating a level or unifying field for the contributors. Jane Prophet described her collaboration on the *Technosphere* project as "radical", pushing both programmers and artist further. Jackie Hatfield's description of her collaborators as "crew" seemed relevant with her functioning as part of a team following structures similar to film making.

Helen Sloan mentioned artists pooling their different skills reflected by the growing number of artists groups such as Antirom, Auditorom and Soda. But she also pointed out that there is still a hierarchy where artists are considered more important than technicians. Perhaps this lay at the root of Andrew Sabins problem with the digital model of *The Open Sea* as it may be perceived as removing some of the creative process from the lone artist. It is something I also struggled with when I felt undermined by my attempts at collaboration initially as documented in Case Study 2: Safety Net. As I explain in the introduction to this thesis, my Modernist training led me to explore materials by manipulating in the studio to develop my sculptures. This approach to working became challenged by new practices of collaboration. Collaborative work and the erosion of artist's ownership of that work reflect Postmodernist ideas where meaning is produced in the public rather than private sphere. The computer provides easy access for the artist to move immediately from their private thought to the public sphere via email, the Internet, visualisations etc. I have a sense that the role of the artist working with new technologies may emerge increasingly as more co-ordinator than solo maker.

Control of the Artist, Position of the Audience and Interactivity.

Promises of the possibilities for interactivity were one of the original reasons for my interest in digital technology as it was for Jane Prophet and Jackie Hatfield (Interview Analysis 5: Interactivity). What linked us was the opportunity to alter our relationship with our audience again echoing the Postmodern idea that meaning might be created in the public rather than private domain.

When this works the relationship between the audience and artwork is extremely successful and satisfying to engage with, e.g. the work of Toshio Iwai. His piece *Resonance of 4* works because it follows a sort of game format where the audience is given a set of parameters that they know how and where to act. Helen Sloan called this example of interactive artwork "semi-authorship". This is an interesting categorisation as it indicates the problems that occur in many interactive works when the audience feels cheated by the degree of control they are subjected to or that their interaction

makes little impression. As Helen Sloan says “ultimately the artist is in control of the viewer...that’s what making art is all about.”

Through this research I learnt that although I want my sculpture to physically engage with the viewer I wanted the authorship of the work to stay in my control. This led me to the performance works Case Study 5: Performance, where the audience watched me interact with a computer model.

Interactivity is a valuable addition that digital technology can bring to sculptural practice, there is much to be explored, but it needs to be inherent in the structure of the artwork and not the technology. Toshio Iwai’s piece worked as a system for the collaborative production of music the artist provided the building blocks for the audience to create the music.

I already knew what I wanted my audience to experience and that I wanted to involve them physically with the artwork, and I hoped the computer would allow the audience to experience the work in different ways and at different time scales. I also knew what/how I wanted the audience to experience the work but found it frustrating trying to second-guess how the audience would react to the work.

I think I had misunderstood the relevance of interactivity in my work. Possibly because of my difficulties with collaborations I didn’t want the audience to affect the work really, I just wanted an alternative method of presenting my ideas. Where the artist genuinely needs the audience to bring the piece to completion is I think a reasonable benchmark in deciding if the interactive artwork is going to be successful. Jane Prophet also experienced problems with interactivity after the success of *Technosphere* in its environment of the internet, which functions through interaction. She experienced problems with her interactive gallery piece the *Internal Organs of a Cyborg* where the work could be criticised as having veered towards elaborate illustration rather than successful interaction.

What Changes to Expectations and Values for Contemporary Sculpture has the Research Led to ?

One of the most important areas digital technology brings to sculptural practice is the ability to visualise and show the invisible. Examples of these are Sol le Witt sculpting smoke capturing an intangible phenomenon which is then cast in aluminium, my attempts to visualise Andrew Sabins *The Open Sea* before it is made, or Orlan pushing her body beyond the extremes of her nine operations through her digital self-portraits.

New technology adds a level of abstraction to our thinking as David Blandy describes, placing reality into virtual space to question reality and reflect how as a society we increasingly experience reality through virtual and invisible processes.

In Chapter 2 Flattening Reality I quote Fredric Jameson’s description of the transition of style from Modernism “a ‘deep’ expressive style” to Postmodernism “an art whose imagery appears depthless” referencing Virilio and Baudrillard. I discuss this depthlessness and that capitalist culture is saturated by the image. (Chapter 6 Between Modernism and Postmodernism). By permeating every part of daily life images tend to become corporate, standardised. What does this imply for artwork if, as I mentioned earlier, the computer should be regarded as mediator, levelling all information pro-

cessing many types of media which become code and output as digital image with the 'look' of the digital image?

Through this research I have become aware of the paradox of my situation as an artist. I began the research to explore this new media because of the power of the image in our culture. No longer satisfied as only the consumer of these images I hoped that by using new technology I could question, subvert the power of the image. In using this technology I find I am increasingly complicit with the production of more images through the use of the readymade language of capitalist culture, software.

Luce Irigaray describes the loss of the experiential in our culture as significant. (Case Study 3 Exorcising the Flesh) She writes that the dominance of the visual sense over the other senses, has led to the body losing its materiality and being transformed into image. Irigaray questions the privileging of the visual over the non-visual, describing the objectification of women as based on the visual, women relegated to a passive role striving to be a beautiful object for men's viewing pleasure. The prominence of digital media in our culture seems to reinforce this, an area pursued by Jackie Hatfield through her practice and research paper *Disappearing Digitally*, and is an area for future research.

I attempt to explore the idea of women reduced to image for men's pleasure with Case Study 5: Performance. Lara Croft, a constructed computer woman, is presented as a ventriloquist's dummy exploring the importance of touch, sexual satisfaction and the body through my performance placing myself in the glare of the digital projection.

I think it is important for artists not to retreat from the problem of engaging with digital image production but to reinvent the medium for ourselves.

What are the Implications for the Development of Sculpture as a Discipline?

I realise that digital technology can act as both material tool and medium in sculptural practice. In terms of accessibility software may be regarded as a tool, for those of us who can't or don't wish to program. The hardware of the computer, the pixels, and light impulses on the computer screen could all be regarded as materials for sculpture. Software allowed me access to the computer, but it also led me to consider the issues surrounding the autonomy of software and the global corporate power of the computer industry in general.

I began to regard software as a cultural tool or as I described it, a type of 'Ready-made' a package of actions and events to manipulate and interpret a stream of images that reflect the dominance of the image in Postmodern culture.

The notion of understanding computer software as a Ready-made was important for me to understand the medium of digital media in my sculptural practice. Marcel Duchamp created Ready-mades to free the object from its image as a reaction to living in a materialist culture and to challenge the traditional means of art production. Now we live in a culture where the object has become not only free from the image, but where it could be argued that the object is no longer needed.

To some extent introducing digital media to my practice has led me to feel complicit with the image saturation of culture, but the idea of the physical object becoming redundant in Postmodern culture has become highlighted by my experience of digital media.

I missed the tactileness of making when using the computer. As Jane Prophet commented digital media has not led us to a situation where we can easily take flight from the body, on the contrary it raises and questions leading to a reassertion of the physical. Perhaps the addition of new technologies to sculptural practice will allow a greater awareness of what is lost in our cultural concentration on the purely visual. My exploration of the 'real' and the 'virtual' working between the virtual object and physical object has led me to want to work with senses other than visual, adding the smell of vanilla to my sculpture *Fat-Free Fat* and working with sound in the series of performance works. The potential new technologies offer for the audience to have a tactile experience with the artwork was one of the reasons Jackie Hatfield was drawn to computers originally.

Luce Irigaray's comment that the dominance of visual sense over the other senses leads to the body losing its materiality and being transformed into image, may be endorsed by new technologies. But these technologies can also provide opportunities for other senses to be explored through the merging of diverse media e.g. sound and touch screen interactivity. Digital imaging allows the creation of seductively 'real looking' visualisations of the invisible, suggested, or imagined making significant additions to sculptors' practice in their search for the madeleine.

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All web addresses are subject to change. They were checked and available online 2 September 2001.

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Orlan) and the other is *Image – Nouvelle Images* (Image – New Images). The first name relates to the character she is gradually assuming from images of virgins and saints. The latter name makes reference to Hindu gods and goddesses who change their appearance to undertake new works, which she feels she will also do after her transformation by the operations.

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Chapter 4: Problems of Presentation, pp40-45

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Interview 5: Interactivity, pp46-48

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Case Study 4: Visualisation for Andrew Sabin, pp61-67

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Chapter 6: Between Modernism and Postmodernism, pp68-70

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Case Study 5: Performance, pp71-76

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Glossary

Cosmo Player Cosmo Player plugs in to your web browser to enable you to explore 3D worlds. With this program you can visit any 3D world authored in the Virtual Reality Modelling Language (VRML). You use the main controls on the Cosmo Player dashboard to do two things: move around in 3D worlds and examine objects in 3D worlds. (www.cosmosoftware.com)

Director and Flash (Macromedia) Both programs are produced by Macromedia and allow you to make animations and create interactivity. Director is commonly used in the development of CD-Roms whereas Flash is more often used to create animations and interactivity on the Internet. (www.macromedia.com/)

Doom A popular 3D action game, released by games developers 'id' in 1993, recognized in computer gaming world as the catalyst for similar 3D action games, an estimated 15 million copies have been downloaded around the world. (www.idsoftware.com/killer/doomult.html)

Photoshop (Adobe) Photo manipulation program. (www.adobe.com/products/photoshop/main.html)

Pixelation The individual areas of illumination from which an image is composed.

Plugins The name for small extra software programs that can be installed to extend an existing program's capabilities.

Polygon count A term used by 3D modellers when building 3D models. The more complex the object, with many sides and angles, the higher the count. The higher the polygon count the larger the file size. Game-modeller's try to make their models as low a polygon count as possible because they react with more speed.

QuickTime (Apple) Free software to edit and play movies. (www.apple.com/quicktime/)

Tekken A fighting game for Sony PlayStation (in-home digital game console) released in 1994 developed by Namco Ltd. (www.namcoarcade.com/tekken4/index.asp)

3D Studio: Release 4 and Max (Autodesk) A 3D modelling and animation program able to automatically transform 3D Studio files into the code for VRML. As with all software the product continues to be upgraded when I started this research project I learnt 3D Studio Release 4, then the whole interface was changed with the

introduction of 3D StudioMax and the latest release is 3D StudioMax4.
(www.discreet.com/products/products.html?prod=3dsmax)

Tomb Raider A narrative 3D action game released in 1996 by Core Design Ltd and published 1996 by Edios Interactive Limited. (www.tombraider.com/)

Viewports Framed areas on a display screen for viewing information. In 3D modelling software the screen can be divided in up to 4 viewpoints allowing the user to view the model from different perspectives.

Virtual Reality Computer-generated simulation of a three-dimensional image or environment that can be interacted with in a seemingly real or physical way by a person using special electronic equipment, such as a helmet with a screen inside or gloves fitted with sensors.

VRML The Virtual Reality Modelling Language (VRML) is a file format for describing interactive 3D objects and worlds. VRML is designed to be used on the Internet, intranets, and local client systems. VRML is also intended to be a universal interchange format for integrated 3D graphics and multimedia. VRML may be used in a variety of application areas such as engineering and scientific visualization, multimedia presentations, entertainment and educational titles, web pages, and shared virtual worlds.
(www.vrml.org/Specifications/VRML97/part1/introduction.html)

Appendix A

Chronology of Interviews and Case Study Projects

1996 November, Case Study 1: Have Your Cake and Eat It

1996 December-March 1997, Case Study 4: The Open Sea Visualisation for
Andrew Sabin

1997 13-26 June, Interview: email with Dr Jane Prophet

1997 July, Case Study 1: Have Your Cake and Eat It

1998 28 February, Case Study 2: Safety Net

1998 17 September – 31 October, Case Study 3: Exorcising the Flesh

1998 29 October, Interview: tape-recorded with David Blandy

1999 6 February, Interview: tape-recorded with Helen Sloan

1999 7 April, Case Study 5: Performance

1999 27 November, Case Study 5: Performance

1999 20 April, Interview: tape-recorded with Andrew Sabin

1999 3 May, Interview: email with Jackie Hatfield

2000 31 January, Case Study 5: Performance

2000 17 March, Case Study 5: Performance

Appendix B

Interviewee Biographies

David Blandy was a student of sculpture at Chelsea College of Art and Design between 1995-98 graduating with a BA (Hons) 2.1. Since then he has exhibited nationally and abroad and has been accepted into the 2001 MA in Fine Art Media, Slade School of Fine Art.

Jackie Hatfield is an artist using film, digital image, sound and performance. She makes expanded moving image installation and single screen works. She is currently Lecturer in Contemporary Media Practice at the University of Westminster where she is completing a practice-based Ph.D. in authorship, audience and artwork, developing installations with moving images, random access delivery systems and multimedia authoring.

Dr Jane Prophet works with video, installation and digital media. After graduating from Sheffield Hallam University in 1987, where she studied Fine Art, she went onto complete and MA in Electronic Graphics at Coventry University. Her interest in digital systems and artists' use of computer imaging became the focus of a Ph.D. at Warwick University. She uses new media technologies in the production of Internet sites, CD-Roms and large-scale interactive installations. The award winning web-site *TechnoSphere* reflects her interest in landscape and artificial life.

Andrew Sabin studied sculpture at Chelsea College of Art and Design from 1979-83. He has exhibited widely both here and abroad. He is Senior Lecturer in Sculpture at Chelsea College of Art and Design. Following on from the *C-bin Project* he is currently creating sculpture for a waste management project in Castlemilk, Glasgow.

Helen Sloan has been working for over 10 years within the realm of electronic media as a curator, writer, and researcher. She has focused on the exhibition and distribution of those media in public spaces as well as within the gallery. She has curated a number of events and exhibitions including *Digital Dreams*, *River Crossing*, and recently *Star Dot Star*. She is interested in the role of sound in interdisciplinary arts projects and specifically those involving electronic media

Appendix C

Interview Transcript:

Jane Prophet, 13 June 1997

I first saw Janes work as part of the *Art aids* website in 1995 and later met her at the *Digital Dreams* conference 15-17 November 1996 in Newcastle, where she gave a presentation about her work and where I asked her if I could email her some questions.

K.A. Have you always used a computer to build your work?

J.P. No. I did my degree at Sheffield Poly doing live work and installations that used super 8 film, slides and sound. In my final year I used video to make a multi monitor piece, but it was very much part of my live work, a figurative piece with no computer effects etc.

K.A. What made you choose to work with computers?

J.P. Well, I wanted to do an MA in video in Holland at the Jan van Eyck Academie, where Elas Stansfield was teaching: where video was all about ideas and not a techno fest! I got a 3-year grant from the British Academy to do this, but they specified that I had to use it in UK. So I decided to jump in at the deep end and try something new. I went to Coventry Poly to do MA Electronic Graphics which enabled me to learn to use a computer (I'd never even used a word processor before).

K.A. Do you translate your ideas directly on the machine or do you use other media first?

J.P. I do badly drawn sketches and storyboards, as well as writing up ideas from notes in sketchbooks. Once a piece is underway then I tend to collect a lot of images and texts and play around with them both conceptually and later on the computer. I tend to do very tight sketches of 3D models before I model them in 3D Studio, because I'm a slow 3D modeller and I want to be very clear about the object before I start. When it comes to animation it's different - then I do lots of tests directly on the computer.

K.A. How definite are your ideas when you begin to work with the computer?

J.P. Sometimes too definite! On each project I have some ideas that I just don't deviate from and other sections that are unknown to me, for example with

Swarm I knew I'd make big hives and such right from when I wrote the proposal, but I had not planned my images at all, they evolved during the residency. (Preema Arts Residency)

K.A. How does working with collaborators influence your practice?

J.P. On *TechnoSphere* the effect was radical - although I'm very stubborn about what I want to keep in, programmers come up with great new ways of thinking about things and with *TechnoSphere* we developed the whole thing as a team (me, and Gordon Selley and then for Version 2 Richard Hawkes as well). On other projects it's more like collaborators work for me doing something that I've specified, but even then there is always a creative dialogue (or tension!) which feeds into the work. Sometimes discussions result in a development or impact on the next piece rather than the current one (so the sensing stuff that Phil Loughran did for me for the frames and hive in *Swarm* lead us to think about lots of different sensors, then in *Sarcophagus* I used infra red, which I had thought about during working with Phil previously).

K.A. How much control do you wish the viewer to have, do you consider your work interactive?

J.P. Well, the level of interaction varies wildly, so in *TechnoSphere* it's deep level interaction - the users actions directly affect the digital ecology and change the nature of the project itself, whereas with *Sarcophagus* the sensing is subtle, much less point and click, cause and effect, more ambiguous (some people hate that, others really like it!). *Swarm* is somewhere in between, because although the cause and effect is obvious the piece or its ambiance is affected by the particular number and behaviour of the people in the space at any one time.

K.A. Are there any examples when your work has been influenced as a direct result of an accident when using the computer?

J.P. Well, sort of. I'm using quickcam video a lot for my CD-Rom, as a result of seeing it used for tele-conferencing and thinking it looked rubbish and playing with the rubbish aspects (the time lag, blurring, black and white etc).

K.A. What made you build physical installations, such as *Swarm* and *Sarcophagus*, rather than work existing only in cyberspace? Have you built physical work before this?

J.P. I guess it was like going home, or trying to! Like revisiting the experiences I had as a student building real 3D environments. Hopefully with a more interesting set of ideas. But it's tough to do my first two installations for 10 years in such a public glare, not able to show the piece and get feedback

beforehand is nerve- racking - when I do a computer-housed piece I can show it easily and get feedback during the production, but with big pieces like *Swarm* and *Sarcophagus* the first time see it together is when I install it. Scary.

K.A. Are you bothered by the lack of physicality when building work only on the computer?

J.P. No, but I miss the physicality sometimes. I guess I like to do a mixture of approaches.

K.A. What problems did you encounter when building the interface for *Swarm* and *Sarcophagus*?

J.P. Most surprisingly the problems were never about the sensing, we tested all that long in advance and I was lucky to work with good technical people. The most difficult aspect is trying to second guess how visitors will respond and interact: *Swarm* went very well and people immediately engaged with the interface; with *Sarcophagus* it was less successful, some people wanted a more obvious 'event' to happen when they touched the body. This gets more tricky because then other people found the ambiguity pleasing and were relieved that the piece was not 'jumping up and down' going "look at me I'm and interactive digital art work". I guess that the jury's still out on that one and I'm still unsure about it. What I did feel is that I'd keep the interface of the touching, but I'd make the images that were triggered much more ambiguous, maybe to echo the interface in a way.

K.A. What do you hope a physical visitor to *Swarm* would gain from the piece compared to a visitor on the internet site?

J.P. On the website you can add data, leave a trace of yourself, which doesn't really happen in the installation. Both are playful spaces in places (the paint and larder on the website and the floor in the physical installation). The quality of light especially from the honey jars was very resonant for a lot of visitors to the installation, as was the sound.

K.A. Are you or have you considered making work that is totally immersive?

J.P. Yes. I would like to to, but it's too costly for me to really engage with right now.

K.A. Did you agree with conclusion at the end of Simon Yuill's piece in the magazine *transcript*, *Jane Prophet The Double Landscape* (pgs 73-78 *transcript* Vol 2 - Issue 3) when he suggests that "What began as fragments of a body distributed across the terrain of the web appears now to be transplanted back into the body. The data landscape dwells within the physical. The funereal qualities of the work, however, suggest a negative outcome of the dichotomy

presented by Richard Coyne our two landscapes occlude from one another and data remains, not as open terrain but as the sealed remnant of the physical - the memory of its sensorial organisation.”?

J.P. Umm. still thinking about this, email me again if you want this answered!

K.A. Could you imagine making an installation or sculpture that was totally physical?

J.P. Yes. In a way I see that as inevitable at some point, as I get more confident and if my ideas change - at the moment my ideas are wrapped up with commenting and responding to new media and its impact on society in a small way, and I feel the need to use the machinery as I do that at the moment.

K.A. How much do you think artists need to know about the equipment they use, do you program?

J.P. I think you need a good conceptual grasp of the technologies that we want to access, to get the most out of them and to be able to communicate with technically adept collaborators. (We need to speak some of the same language and understand when to accept something can't be done, and when to keep pushing, cos it's amazing what can be achieved with some stubbornness a good programmer and a little lateral thinking by an artist and a open minded coder!) but if we work collaboratively then we don't necessarily need to programme etc. hope this is Ok xxJane

Appendix D

Interview Transcript Part 2: Jane Prophet, 21 June 1997

K.A. Concerning *Sarcophagus* Simon Yuill notes in the *transcript* article that the data landscape is transplanted back to the body, but says that the funereal qualities of the work, suggest a negative outcome, do you agree and if so why concentrate on the body?

J.P. I don't personally have a dystopian view of the impact of new techs on society. However, I think that the problem is complex, and that when it comes to technological interventions at the site of the body the debate/focus is simply more concentrated than when thinking about the same issues in a non-corporeal setting. To me the questions are dominated by the economy of new techs – the question of WHO will be able to afford the augmenting surgery and of who will only get it in the early days as 'guinea pigs'. For me the question is also about re-asserting the physicality and the centrality of the corpus -we are NOT in a situation whereby we can easily 'take flight from the body' even when in VR simulations we are subject to the sickness which reminds us that whatever visual and audio environment we inhabit, the body is rooted to the ground and wearing uncomfortable headsets and sweaty powergloves!

K.A. Is immersive VR the only real option to capture our sense of being there?

J.P. No. Many art works succeed in taking us on reveries or journeys, and most of them do it more effectively than VR sims! The power of suggestion and the human imagination has learnt to guide us to 'other places' via pictorial representation or sensory suggestion. Shame that commercial VR has not caught on to this and that it prefers to obsess over simulation rather than expression or abstraction.

K.A. Is art mixing digital imagery with real objects doomed to an unsatisfactory union, a halfway point between total immersion?

J.P. No, it's just early days a few of us are struggling to find a way of mixing the media areas. I like to think that our inarticulations and the awkwardness of some of the work are a result of us just have not having had enough practice yet. And some works are very successful....Jane

Appendix E

Interview Transcript:

David Blandy, 29 October 1998

I met David in my role as visiting lecturer during his second year as a student in 1996 at Chelsea College of Art and Design. The interview was recorded face to face.

K.A. What kind of media did you employ before you began to use computers in your work?

D.B. I wanted to create a virtual space, changing scale, started in the first year using found objects e.g. clothes pegs, create a civilisation with the clothes pegs, then I realised that although I saw the clothes pegs as an army and had imbued the pegs with a new identity. People saw them as clothes pegs, with the implications of hanging out the washing etc the domestic implications I just like the look of them. Then I started to make a comic that dealt with flat comic space, it went from the flat 2D in black and white then on the next page jump to a photographic space with the drawing superimposed. A character would move from the flat comic space, to a photographic space and then finally in to a virtual space with background taken from the computer game *Doom*. Became more interested in the idea of virtual space and felt computers were the only way to deal with this kind of space.

K.A. While you were trying to build the virtual space with the computer, did you also try to make the space in physical materials?

D.B. I did a projection on to a piece of scratched glass of a tunnel. I thought of the glass as a computer screen, the projected tunnel continuing infinitely, trying to imply an infinite virtual space. I was interested in the two layers of glass; I tried to make infinite tunnels out of wood. A tutor then asked where I was in the space, was I a spectator or was I in the tunnel, which led to me dealing with the virtual space head on. My experience of virtual spaces had been mainly through computer games.

K.A. In my practice I discuss the notion of the space between the actual and the virtual, how does the computer alter your notion of space?

D.B. Working with computer programmes and playing computer games gives me a different viewpoint on the world. I go round continually deconstructing objects to see how I could build them with computer software, it makes you more aware of how the real world is constructed, and you appreciate how

intricate the world is. When using 3D modelling software you have to dissect an object in to separate shapes to be able to construct them. I created a character, a hybrid between 'Mario', a Nintendo game character and myself. I used a software program called Poser to build the character. The program allows you to change the size of limbs by percentages; I created a character that was the in-between of my size and the Mario character. I called it the demon child, it was a virtual being, and it was skimming the line between virtual and real. I projected the image of this child on to a wall human size with a line behind like a police line up. It was a strange experience because of its proportions being all-wrong; it was a disquieting image. All my work tries to bridge the gap between the virtual and real. I made videos of me playing computer games it is about the effect the game has on the body, a captive audience this is the virtual having an effect on the real. To play the game I have to move my thumbs in certain ways.

K.A. To what extent does the medium determine the work you make, what importance do you place on the use of software rather than programming? (Considering the idea of adding software to a Postmodern sculptural practice.)

D.B. Once I started using computers I wanted to be as honest as possible so the work becomes partly about computers, when your whole artistic practice revolves around using computers it is inevitably going to start to be about the machines themselves.

K.A. But it did not start off like that did it? You said earlier that you started to use the computer to describe space so the initial reason for using them was to work out a sculptural problem.

D.B. I think computers are amazingly seductive, you start to tailor what you are going to make around what you know a software program can do well. Although this was not always true. In another piece of work which I made the Mario character look like me, I made the character breath I did this using a software program called Premier. Premier is good at dissolving between different pieces of film, for this piece I used it as a stop-frame animation package, which was not really what it was designed for. I knew the program could do this. I built a piece using the backdrop from a game called *Tekken* I mapped this image on the inside of a cylinder in a 3D modelling package then rotated a camera inside which created the illusion of continually looping round in a forest. I felt this piece blurred the boundaries between real and virtual spaces many people viewing the work could not distinguish whether the wood was real filmed with a camcorder. I did want people to recognise the digital origin of the image through the pixelation of the image. But I wanted the viewer to be in a state of uncertainty not knowing if they were viewing a real or a virtual space. I felt this piece was the most successful at bridging the gap between the real and the virtual I think this was because I brought it into

the viewers' space the most. It was projected so it had a sense of scale, because I was very familiar with the game that the background came from I felt I was walking in the space of my computer game. It was the nearest to a virtual experience I could create without getting into expensive immersive virtual reality. I want my work to have a metaphysical aspect to it, not just about a computer game but also an exploration of virtual space, how we exist in it. I saw the space as dark and very shallow, the trees were only on the surface, it was hard to imagine travelling through them. I feel about computers in general that it's hard to get beyond the surface and into the bit beyond. We desire to be right inside the space, a virtual arena we want to be able to put on a head set and live inside the space, but we can't yet and I don't know if we will ever be able to, unless we can implant into our bodies. The internet promises you that you can go anywhere in the world, and then when you go there you realise that most of the stuff on the internet is rubbish. We are sold an idea that virtual space will allow us a limitless space like reality, but it is always a closed and controlled environment controlled by the programmer. Interactivity is deceiving as it is always limited and controlled by the programmer. The environment is all sorted out before you get there. It's a safe world where you can have fun. For example in PhotoShop you can do as much as the plugins allow.

K.A. If you're using software as a medium for creativity why use it in sculptural practice, if you can only work in the confines set by some one else?

D.B. I don't feel any more constrained as I do with any other material. If you want limitless possibilities on the computer you become a programmer. But this would take up so much time it would take you away from making and possibly become more of a technical exercise.

K.A. Have you wanted to learn programming?

D.B. I have but more to understand how things work, rather than a desire to create my own package. I think programming can become a bit of a dead end, if it becomes the sole aim of the work. But on the other hand if you are a very good programmer you could communicate something amazing being able to go beyond the recognised territory of a software program.

K.A. What is it about software that makes it interesting? Why do people use it apart from the ease of learning compared to programming?

D.B. Software helps open your eyes to what is possible.

K.A. Considering developments of accessibility for using video e.g. the rise of handy cam cameras, do you see software as a similar convenience making the computer easy to use?

D.B. I don't think there is anything as convenient as a handy cam in terms of computer software. There is still a steep learning curve for every software program. I have had the problem myself where I have been carried away with the making, losing sight of what I originally intended, it is so difficult to get it working that you feel you've achieved without concentrating on what the piece is about. Computers are not easy enough to use to compare them to the ease of use with video camera. It is also not cheap to use this technology. I liken it to music when techno was described as punk music but you need very expensive equipment to create it, and you need the knowledge of packages. Only in photo manipulation do you get a reasonable effect that's not too difficult but even this is time consuming to get it looking good. In a way it seems easier to understand you're working in 2D, and the end product is 3D, when you work in 3D it is hard to visualise how things may end up and when something does work I'm often not quite sure how it happened.

K.A. Do you think the steep learning curve contributes to the fact that digital art is still separated from the mainstream fine art?

D.B. Yes, I don't think people read digital art in the same way as they read sculpture. I think you ask a lot of the viewer when dealing with digital art work in terms of cultural awareness, and interactivity which is a taboo which is still hard to break down. Also there is this problem between entertainment and art, the viewer does not know where they stand in terms of digital work. In my work where I have been using computer games I was trying to show my relationship with the character, I wanted to be more than just a gag. I wanted it to imply more, but maybe the medium itself stops it being taken more seriously. I want to comment on pop culture through the use of computer games, but I realise that the area I am dealing in is actual quite elitist. It is populist, but only to certain groups like 16year old adolescent boys. The gap between digital and fine arts is because it is a medium for entertainment, not seen as a medium for art. It will change.

K.A. Do you think that because it is so difficult that the content of work tends to be overlooked getting the thing to work becomes overly important?

D.B. But I feel this can happen with other mediums. The computer can capture you, its repetitious activity can induce a trance-like state. It eats time. The computer has replaced physical objects in my work. I see it as the most direct way to deal with virtual space. I want to create alternative psychological space. Trying to pinpoint the appropriate use of the computer in sculptural practice. It is such a part of every day life computers control so much of our lives, that this has to be reflected in the way we make art, I see the virtual space as a separate but intrinsically linked to reality. Place thoughts about reality into virtual space, measure it and you start to measure reality by the virtual. I can create my own safe virtual space I can control it.

K.A. But why the medium of software in particular?

D.B. Well for me it came down to a sort of truth to materials. I was working with ideas about computer games so it was natural to make work using them. Using the material that was there, using PhotoShop as a filter, creating something that talked about the space that I was looking at originally.

K.A. Would you consider that a Modernist point of view?

D.B. I think it's more Postmodern bringing diverse elements together, blurring boundaries of high and low art. If I had been a Modernist surely I would have mucked around with the code (like Darryl Viner) where as I was just dealing with the illusion of that. Postmodern is just taking the elements that I felt were necessary, sticking it together its dealing with illusion. It's all simulation I want the end result to look like it came from the game but it's just a bit of trickery really.

K.A. It seems to come full circle, software the ultimate simulation stuff?

D.B. Its to do with the 'look', the façade. Programming seems much more of a Modernist urge, build it yourself, it has to be yours. But for me, if I can make it work by cobbling bits together I'm satisfied, it doesn't mean it's not difficult.

K.A. If the computer is a tool of Postmodern practice how does it add to your sculptural practice?

D.B. I was dealing with space and objects. I wanted to talk about virtual space so why not use computers. I still saw that as sculpture, the psychology of space.

K.A. What has been your experience of using computers within education e.g. the sculpture department? How could the experience be improved?

D.B. On a technical level sculpture did not have any computers in the department so you had to beg for the use of combined media department machines. It made it hard to work. But I felt supported and accepted by the ethos of the sculpture department. I don't see why there couldn't be one computer in the department

K.A. Why do you think the sculpture department has no computing equipment?

D.B. Because they don't want to deal with this expensive new area I felt I was more put up with rather than actively encouraged. They wanted it to be dealt in Combined Media. There is a desire to make physical things, you want to be able to smell and touch environments but I suspect they would smell pretty boring. Most textures on walls in games look pretty boring to touch. I slice off

the surface level and try to imbue this surface with my own depth with a whole different set of connotations and meanings-my own psychological take on the materials. While using the surface of a game or a joke it becomes about other things.

Appendix F

Interview Transcript:

Helen Sloan, 6 February 1999

I met Helen Sloan while working at Camerawork Gallery, London. The interview was recorded face to face.

K.A. How did you become involved in digital art as a curator?

H.S. That was partly personal, due to contacts I had and partly that I could see a real possibility for the use of digital media in terms of expanding the way we actually produce work.

K.A. Because it was mostly photography before then.

H.S. I was actually at Oldham Art Gallery when I started working with fine art and community art, not only photography it was more mixed media. In 1987-88 a whole group of my friends were studying at Middlesex University that was then the computing in design course. They set up this thing called The Computer Culture Group, they were doing was very interesting work. In 1987 there was a show at Cleveland Art Gallery called *Computers and Art*, it was the beginning of this new wave of digital media. I rather naively thought this is just the beginning. We can now start to bring digital media into work alongside sculpture, printing, painting or whatever. Digital media would be a great tool for facilitating all this and including interactivity, there was a lot of potential, many things that I was interested in. What actually happened of course was that digital media became a medium in it's own right, and I was very disappointed to see that happening, members of the Computer Culture Group were also bemused by this.

K.A. Were they actively trying to mix the two? Or was it not a subject people thought about at the time?

H.S. No, I don't think it was a subject, it was just people wanted to use computers, and they wanted to use computers inventively, especially Richard Wright and Graham Harwood. We had a proposal to the arts Council to do an exhibition called *Terminal Culture*. Because at that point we were all going, "oh this is great we don't have to worry about the computer as it will soon be subsumed into everything" we thought it was just a glitch, a glitch that has lasted 10 years.

K.A. How much do you think artists need to know about the computer equipment they are using? What is your opinion of the debate between software and programming?

H.S. It's a difficult question, there are some artists that manage not to know anything about the equipment and manage to direct technicians in away that is evocative and aesthetic examples, artists that have banded together in groups like Tomato, Antirom and Audiorom who all have different skills.

K.A. Do you think that the way artists are overcoming the problem?

H.S. I think it's a way artists are dealing with the problem. I'm not totally convinced they're overcoming the problem but they are dealing with it. As to the debate between programming and software, *if you want something to be done and you find a programmer that understands what your getting at then I don't see why you should not use them. I think its important saying that one of the things that came clear to me through a number of exhibitions, for example Star Dot Star* in spite of the fact that there was an awful lot of technical support being given and very little credit given for that support. It wasn't true of all artists - Mark Whinstanly and Mike Gide did everything themselves; no, actually they also had an electronics expert who did not get credited. Tessa Elliot and John Jones had electronic experts who also weren't credited and Paul de Marinus, all these people I do have a problem with that, as I have a problem with video artists who don't do their own camera work.

K.A. Is it the fact that they don't do it, or is it the fact that they don't credit?

H.S. I think the names should be on the titles or we need to structure art production or the way we credit art production in a similar way as they do in film production in relation to multimedia. Some of the most interesting artists are people who do know how to write their own computer programmes. Tessa Elliot and Jonathan Jones may not know about electronics, but Jonathan knows about programming. Because of that they do some very interesting and innovative stuff in this country and you've got people like Myron Kruger from earlier on. With software it's like being able to handle a paint brush, some people can and some people can't, you do find that you can get to a certain proficiency or level in certain packages and there is a look to that package. It is the people who manage to transcend that look, that interest me and some times it means they have to write their own computer programmes. It's still very much a new field and one where clearly debates around authorship it is no coincidence that people like Walter Benjamin are back in fashion.

K.A. I have been thinking about that debate, for me using software and its 'look' is part of the artwork so it becomes part of the identity of the piece, rather than

trying to disguise the software 'look' I was interested in the 'look' as the identity of a material. I think software can be used to comment on society.

H.S. I think that's true up to a point, I have thought about this a lot; the problem is that some things hit a ceiling. There is other stuff, if you think about web cams and audio on the internet, what your getting is a lot of people who are dealing with the fabric or the material building blocks and dealing with the limitation. That's actually a very interesting point in history but you end up wondering what people are going to think about when they look back at this work. Is it going to look like early experiments with electricity where we laugh at everyone for doing these ridiculous things?

K.A. And there is a tendency to fetishise low-tech material.

H.S. I don't know, I think we have to accept that we are in a period where we are stabbing around in the dark. We must accept that lots of things we do now as artists and as producers, both in the commercial and fine art sector will look a bit preposterous in 50 years time.

K.A. Do think the division between digital and fine art is merging?

H.S. Well yes, they do seem to be beginning to merge and for me the *Star Dot Star* exhibition was a real example of that. When I created that show it was supposed to be a homage to the exhibition *Cybernetic Serendipity* (putting aside the fact that we had very little funding) the one thing that did come clear to me was the way in which artists were producing work. It was no longer like scientific experiments, it was very much concerned with sculpture and installation, and people were really beginning to think about the form of the work. If you think about *Cybernetic Serendipity* that show was much more like a laboratory with experimentation going on which were both valid ways of working. To see these quite hermetic art objects coming out of *Star Dot Star* and I was looking at them thinking, did I curate that and I felt uncomfortable with it because I don't always feel comfortable with high fine art shows. I think it was very interesting, (coming back to the review in art monthly), I can't remember the name of the reviewer now, but he had been to the first *Cybernetic Serendipity* show and quite justifiably had lambasted *Star Dot Star* for not being anything like that show. But what he missed the point of was me saying that, I didn't think fine art and digital art had merged it still wasn't seamless and you has these divisions which I believe we still do. He said well what about *Documenta* and the *Venice Biennale*, well I'm sorry but the last *Documenta* there was the fine art exhibition in the Orangery, digital media had been consigned to a tent somewhere. Digital media was clearly doing some of the most interesting work but it was not being given the status that the fine art was being given, it was just that *Documenta* had realised they were going to have to take it on board.

K.A. Does that come from your opinion as a curator or is that how the artists see the status of digital arts?

H.S. There was a point in history, partly through funding, curators, artists and other areas as well when video art was seen as very marginal and peripheral. There was a very particular language being used the same kind of scenarios that occurred with photography is echoed with digital art. The only good thing is that digital art is able to be a lot more ubiquitous than video art, you can publish your work on the internet.

K.A. Unlike video art which never got a space on television.

H.S. It didn't get a space on television or in galleries and it was a marginal activity and digital art is still a marginal activity, certainly if you look at commercial galleries they are still not taking it on board and nor is the Tate really in the national collection. Whether the gap is narrowing or not I'm not really sure, I suppose it must be if you are getting major festivals taking it on board.

K.A. Is that because galleries can't make money out of it because it is quite a hard thing to sell?

H.S. Well that's been the issue about the video sector where what you get is limited editions, Gillian Wearing videos that are sold for £300 each instead of £30. I don't think anyone has solved the problem of the sale of digital art I think people will look much more to the production of film in that sense.

K.A. Bill Gates tried to turn digital art into a marketable product having digital portraits which Bill Gates was going to have hanging in his home. I have the idea that digital art works may be like having a top ten single, you will buy them on a CD-Rom and there will be a chart of the latest works.

H.S. The problem with digital art at the moment is that it spans all types of disciplines and media, what actually is digital art?

K.A. How much control should the viewer have on the artwork thinking of the possibilities for interactivity?

H.S. I quote Simon Schofield he said in a paper at *Lovebytes* conference in 1998 that interactive art only really works if the viewer feels like they've made a difference. I thought that was a really nice quote. But on the other hand how far can a viewer make a difference, there is no easy answer, but I think there is no such thing as true interactivity because if it is true interactivity then it is creating and making. There is quite a lot of mileage in semi-authorship for instance in Toshio Iwai's work, Audiorom's work in particular which funnily enough both deal with audio, sonic, (this may be the way my interests are

leading). In a visual sense I'm not sure I can think of a piece. Ultimately the artist is in control of the viewer, the artist is manipulating the viewer, I know some people may have problems with that, but that's what making art is about. Even a painting is about trying to evoke some emotion from the viewer.

K.A. Yes, I agree I think most artists want that control, that's why they do it, it's having control over a little world. The interactive part is not about how you create, but how the viewer sees what you make. Perhaps with music it is more possible to make music interactively, but visually it can be a problem, but I've never seen it as what I want to do anyway.

H.S. One of the difficulties with interactive systems is that artists produce work where no two people ever get to see the same view of a piece of work. If you have a concept that everyone can understand for example Paul Sermon's *Telematic Dreaming*, a sense people understand the underlying concept, but no two people will ever get the same experience. Whereas you get other work which is not conceptually tight enough and is not helped by interactivity. They do not work because there is no way of one viewer relating to the next what they actually saw. I have problem with that.

K.A. So what your saying is that for example if you look at a painting on a ceiling no person will view it from the same angle because of where they are standing.

H.S. That's true to a certain extent, but if you look at the Sistine Chapel ceiling you get an overall view of the work, where as there are certain commonalities, and I'm worried that in some digital art those commonalities are lost. Thinking about the way broadcasting is going, for example current advertising campaigns, allows people viewing mainstream television not to get the same experience at the same time everynight. May be that notion of collective experience is on the decline anyway.

K.A. It's like hypertext or the Internet where you may not get the whole story straight off but it doesn't stop the viewer being able to enjoy it. That's an interesting point because the viewer is subjected to a new way of perceiving or thinking.

H.S. I found it difficult to get my head around.

K.A. How does working with a collaborator affect/influence your decisions and how have you found it affecting the artists that you work with?

H.S. Working with collaborators in funding etc shapes the way the work is made. Because of having to share the cost of expensive productions, often limits what you can do, it can be constraining but also positive too.

K.A. I felt a loss of control.

H.S. That comes back to the way you approach making and exploring the notion of the artwork as film production, rather than working alone in a studio.

K.A. I have been trained to work individually through my art education.

H.S. Well there seems to be a trend back to that so I would not worry.

K.A. Is the mixing of physical objects with digital objects possible or doomed to an unsatisfactory union, a halfway point between total immersion? This is where I have been floundering.

H.S. I think this works only in very universal things, for instance Susan Collins' *In Conversation*, where it worked very well because it's about the preposterousness of having a conversation with a microphone in the street or a mounted speaker on the street. You have this mental image of people on their computers in their bedrooms while you're standing in the middle of a shopping street. Paul Sermon's piece was another example almost primordial work, which essentially was about sex and snogging, it turns the whole thing upsidedown. But I'm not sure about environment things like virtual galleries on the net where you can walk around, useful for architects but a completely hopeless for any sentient experience. Even people who are trying to work with kinaesthesia the development has a long way to go. People are writing VR for people to overcome their phobias, for example fear of spiders and heights are being addressed through VR. What occupies a physical space is so different from what occurs in a digital space. We're almost talking about phenomenology here. I think it's impossible to capture the feeling of a physical space in a digital space. You can capture it within an architectural space, it's much more interesting to me to explore what is it about physical space that is unique and what is it about digital space that is unique and how can we may be work with the two. I know there are people now working with things like VRML who are trying to create particular places that people can visit in cyberspace that might echo for example an educational institution e.g. a physical space but don't replicate them. How that works in terms of you as sculptor I'm not sure.

K.A. What is your opinion of immersive virtual reality?

H.S. If you think about some of the installations that are done with video projections, work that that is rather old fashioned now, I wish people had kept with it. Similar to what I was doing in the mid 90's. Things like the living room with Simon Biggs and work done with Tessa Elliot and Jonathan Jones. Some of the things that were the most successful and only worked as installation pieces, Like *Passage* with Graham Elliot and Stephen Johnston that was such a

brilliant use of sculpture a semi-immersive environment. Do you know the piece?

K.A. Where was it done, in Camerawork?

H.S. No, I didn't do that piece, it was a Film and Video Umbrella commission *Utopia* in 1994 and travelled to *Video Positive* in 1995. They have since brought it out as a CD-Rom but it doesn't work as well. As an installation it was a perfect embodiment of Walter Benjamin's commentary on the flaneur. You were very limited to what you could do to change the sequences of particular cities London, Berlin and Paris. You became literally a flaneur in these cities watching the world go by, totally detached but every so often deciding to move here or there. You felt totally immersed but also powerless to effect change. It was a perfect piece of work; they had fused the piece of literature with beautiful imagery. It just worked, although a lot of people I felt just didn't understand it. At the time it was lambasted because there weren't enough buttons to press.

K.A. If you can understand the limitations of the media and use them, having the idea that can illustrate the concept it is possible.

H.S. I think VR is good to use to combat people's phobias. But if we are going to use immersive VR why create environments that exist in the real when we might want to invent totally new spaces. I think VR is very exciting being able to invent new space but I can't see the point of wandering through strangely coloured virtual galleries with bad pictures on the wall. People are coming round to this; there is a lot of work with synaesthesia now in VR, this has been going on for centuries in semi-immersive environments. My other problem with VR is that it is isolationist, there is a loss of a collective experience, unless we get to a situation where we can all populate a virtual world I think this is a problem.

K.A. I find that a problem with my work, as I don't want to make something that can only be experienced by one person at a time.

H.S. But there are other ways round this like; for example I took a group of students to LaserCross last week. We were taking about virtual environments, it is tacky like a really bad film set, very cheap, you get to wear a harness. A whole group of people get to experience an immersive environment, maybe that's what's needed, a very elaborate adventure playground, but one that's not true to life.

K.A. Why do you think digital works are grouped by medium rather than integrated into part of sculptural practice?

H.S. No idea and the division really irritates me with funding and peoples' lack of imagination.

K.A. To what extent does the medium determine the work, what importance do you place on the use of software rather than programming?

H.S. I think the medium has been determining the work for far to long, it is work that has a conceptual frame that is really interesting.

K.A. This interests me in trying to have that accidental playful method of working that I can have with other materials.

H.S. That is partly because you have to play a kind of pelmanism with yourself and the computer. That's something that has bothered me. I remember doing a website for the Chernobyl exhibition; we had all these objects that we'd scanned in. I had them all over the floor of Camerawork and I was directing the composition of the pages with real objects and pieces of text I had cut up. I couldn't have done it working from memory on the computer. I said to the person doing the html, "this is interesting I'm working in a physical way to construct a virtual site".

K.A. My experience in trying to be creative with the computer has in a way been similar. From your position as a curator of digital exhibitions what do you think are the implications of adding computers into sculptural practice?

H.S. Dan Edwards is a sculptor who created a whole series of maquettes using the computer. He works out the dimensions, using the computer, he makes the sculptures out of concrete, they are very precise, he is a Modernist, an arch Modernist. He created all these systematic sculptures and tried to work out angles, things needed to be worked out, for example lighting. He has made these absolutely beautiful objects, which in a sense have been crafted on the computer, he has used the computer as a sketchbook, I think a lot of artists are starting to use the computer as a sketchbook. The thing about Dan's printouts and maquettes is that they are actually objects as well. It is the same with Ed Harper's sketches and paintings, he does the oil painting but then does all these sketches on computer using PhotoShop and treatments like that and I think that is an interesting approach where the computer is becoming a tool. I don't think it's fair to say to a final object because sculpture the sculptural process isn't about that.

K.A. It aids the visualisation of the work.

H.S. Yes it aids and saves wasting time, equipment and materials.

K.A. Although I don't seem to be able to do it for myself I have done it for Andrew Sabin. I built a visualisation for him for a piece at the Henry Moore.

H.S. Oh the climbing frame *The Open Sea*?

K.A. Yes, and the computer model looked just like the real thing. That piece works really well on the computer, he tells me all the dimensions of the metal, which is by nature geometric, new and cold. When I try to visualise my own work it doesn't seem so successful perhaps because I tend to work with softer, messier materials. How do you think artists have dealt with the viewer, computer object interface?

H.S. This is a problem because of artists trying to get things out of the screen and not really succeeding because all they do is project large onto walls which means people can take their whole bodies into an interactive environment. There is an issue of where you get a two or three tier system of performance. You've got the performer who is the artist, the person playing around with a mouse on a plinth and the people standing around watching them doing it. That can be a problem, although sometimes it can work. You've got Toshio Iwai's piece where there are four people trying to interface with each other, but if there are not four people in the gallery it doesn't work as well. There are many problems that artists are trying to deal with but they can't because maybe the gallery is the wrong space. Artists need to try and work outside galleries.

K.A. On the Internet, trying to get participation on line, I do think Susan Collins' *In Communication* seemed to get it right, a very simple idea that was very effective.

H.S. I don't think anyone has managed it really perfectly yet.

K.A. Susan Collins' piece made me feel frustrated sometimes because I was never sure whether I was really in communication or not due to the long time lag for the feedback. There was also a sense of disjointed loneliness about it that I often feel with communication on the net. Also when part of the work is in a gallery space this creates a sense of separateness, one or two people orchestrating while every one else watches on. I haven't seen a work that manages to use all elements at once.

H.S. Maybe it's not a solvable problem, maybe art should not be that interactive.

K.A. What do you consider the digital image to be to sculptural practice, a tool a material or an ideology?

H.S. It can be any one of those. The ideology one is a bit dodgy to me, because it is being subsumed into culture. It's not an ideology, it's just another material or tool. And yes, like any other potential art piece is possible to refer back to that material and in that sense perhaps have an ideology.

K.A. I was thinking of Paul Virilio who talked about the whole idea of digital culture it seems to be changing the way they think about sense of self.

H.S. Changing the way we think about things, engage with things, for example radio and television. There is some interesting stuff that Paul De Marinus talked about, the advent of sound recording, there is no written record about anyone having a tune that they can't get out of their head prior to sound recording. Maybe we are going backwards; clearly the technology is changing, but in the way we are engaging with the world is going back to pre-industrial age. Ideologically in the way we have to perceive things, and engage things in terms of art practice (which may be going to shift as well) but in terms of art practice I see digital media as very much a tool and not an ideology but that may change.

K.A. For me it is an interesting point because I thought I was using it as a tool and material. But I think now I choose to use it because of the culture around me. I had to find out how it fitted in my practice. I still don't know if I can use it as a tool or material very successfully. But as an idea, exploring the society I live in I need to include it in my practice. Do you think there is a problem with computers concentrating on the medium rather than the idea?

H.S. I just can't believe it's gone on for so long. Each media that has been introduced over the last 100 years e.g. film, video, photography seems to be making the same trajectories, it would be great for someone to come along and turn it on its head. Why the hell are we all focusing on form, we did that with film and photography why don't we concentrate on something else? I think it's a real problem in terms of the creative process, that still in spite of people paying lip service to experimentation it doesn't really happen.

K.A. It's hard to escape from the world we already know perhaps particularly with digital media because it is so ubiquitous.

H.S. It's interesting that there is a whole heap of cultural theorists and historians like Virilio, Baudrillard who comment on this but nobody seems to take this up aesthetically. Sean Cubitts just got a book out called *Digital Aesthetics*, I am very interested to see what he writes.

K.A. I have noticed that although I read a lot of futuristic theory it's hard to see the way ahead visually.

H.S. I know a lot of people who feel like that at the moment. Look at exhibitions that have been going for years like *arts electronica*, *isea* they seem stuck in a rut the same as they were 5-6 years ago, people seem to be finding it difficult to make a leap forward. In the early mid 90s theorists were way ahead of the technology. They were making claims about the technology that were impossible at the time, so to a certain extent it's caught up now and were actually in a sense at the same point as we were in 95 in reality.

K.A. If the computer could be described as a tool of mass media manipulation, a cultural tool in what way does it effect sculptural practice?

H.S. I'm trying to do things with interactive broadcasting. I never thought I'd end up saying this but I am finding the notion of community arts really fascinating and I think there is a great deal of potential for empowering non-patronising community arts projects to take place. They have already happened on the Internet but them to take place on cable or satellite, that kind of thing is happening in Holland.

K.A. How have you found new media alters the way you curate a show?

H.S. Sometimes not at all, it's been very much about audience and collective behaviour that because I'm very interested in it and would have done it in another media if I was not using digital media. Aesthetics are just the same.

K.A. Do you think digital media will ever be taken seriously by collectors?

H.S. It's work that has an aesthetics presence and it doesn't matter if it's a found object presented in the right context. Yes I do think eventually it will be taken seriously by collectors, people in a certain frame like Gregory Green for example has limited edition discs, and printouts. Interactive art is being collected by museums like ZKR. It is difficult the market has always been so media driven, it's nice to see the Tate thinking of other ways they might collect.

K.A. Do you feel the new Tate at Bankside will add to that?

H.S. I hope so, my only concern about digital art work and one reason why it may never be taken seriously, is that it is very easy to saturate the market and the world with images, I know it's been going on for years but it's happening even more now. There hasn't been a policy for showing digital art work if we don't start making some division in setting criteria were going to end up with a load of rubbish.

K.A. It will be difficult for the art market to deal with, but it deals with it already. Maybe as the market matures it will be self-censoring, the stuff that is not so good tends to go to other places.

H.S. But who makes the quality judgement? That's what worries me. Whilst the whole notion of empowerment (which I fully subscribe to) makes me happy, it also makes me worried that what is produced is going to be judged on the number of hits that it gets, the bums on seats argument rather than anything that's perceptually challenging. At the moment the line between digital media in it's entirety and what is happening within the digital arts is very often leads to things ending up in galleries because people can't figure out where else to place them. It's often not the right place for them.

Appendix G

Interview Transcript:

Andrew Sabin, 21 April 1999

I met Andrew as a tutor when I was a student on the MA at Chelsea College of Art and Design from 1987-88, and then later when I returned as a visiting lecturer in 1993. The interview was recorded face to face.

K.A. Why did you decide to introduce computers into your practice?

A.S. Are you interested in my whole history of computers or only as an art-making tool?

K.A. Yes, as an art-making tool

A.S. Do you want to know about the fact of me using it as an administrative tool?

K.A. I'm not interested in that, purely as a sculptor.

A.S. Purely as a sculptor then you only get a part of the story.

K.A. Well tell me if it is relevant.

A.S. I'll tell you a tiny little bit of it. In a sort of file and folder form I modelled myself a structure, which I thought, mirrored the dynamics of the art world. I could not work the art world, but found I could work my sets of folders and as a result of this I started to be able to work the art world simply by making files.

K.A. Well that seems very relevant.

A.S. So when I first got a computer this was what I did. I found it thoroughly liberating because instead of dealing with personalities and trying to find a way of working with them, I was dealing with names on files and folders. I was sending out letters and doing follow-up phone calls, according to what was on screen rather than seeing it as a person and it paid, so that was the introduction.

K.A. It's the computer depersonalising the art world.

A.S. Depersonalising yes, there is a tendency to become obsessed with certain individuals in the art world and if they are just in the computer on a folder, the

big names have the same presence as the small ones, you just play the whole lot, and it all becomes less intimidating.

K.A. As it started as an administrative tool when did it start to become something that you wanted to add to your sculptural practice?

A.S. Well, Kate, when I came to you.

K.A. You hadn't tried to do it yourself?

A.S. I must have done, yes I did try to do a few drawings and diagrams. I found a few drawing tools, which were vaguely useful, but actually the only way I really found them useful was the print out. The computer print looked very convincing, it just had a kind of authority to it. The drawing served very little practical use and was rather a technical labour to produce, although it did have a kind of authority to it. So then the next thing I did was in PhotoShop I designed a poster for a gallery, using a scanned image of the gallery and manipulating it. Then there was you and *The Open Sea*, I had a need to give people an idea what I was up to and we collaborated and interestingly you produced something that was pretty similar to the final result.

K.A. I was really surprised when I saw it how much it looked like the drawing.

A.S. Yes.

K.A. And I didn't have a picture of it in my head like you did. All I knew was that it was supposed to be croissant potato shaped things and when I saw it there it was.

A.S. It's wholly practical why I decided to use computers in my practice, and also for the gloss that the computer can give an image.

K.A. What methods did the computer replace?

A.S. Administratively it became my agent and replaced my handwriting, and it replaced my agent, and it provided a depersonalised name of some one I could get worried about.

K.A. Did it provide new methods of working?

A.S. I don't think it has so far, but I haven't pushed it that far, it is beginning to because I'm starting to set up web sites, two web sites are coming in the next three months they are both sites that are actively managed. They are sites that have a correlation in actuality, so for the *C-bin Project* we are making a virtual *C-bin Project* on the net and likewise in Birmingham. We are doing a model or

a forum of all the frictions along this high street and again actively stimulating people to use the website and sifting the information that comes in. It is multi-faceted using it as a marketing tool for the traders there, using it as an agitprop tool for local residence, using it for canvassing opinion people might want from their public art input. The exciting thing for me is that it seems a clean space to be as mucky as you can be, so that you can have a real war, lets say between the students and the residence, or between the graffiti artists and the police. You can have as much friction expressed as you like and there is absolutely no damage, no harm.

K.A. Well no physical harm.

A.S. No physical harm and you can put that some where that is adjacent to something that might have a very positive clean cut approach all the frictions. All the positive good will exists in the same space rather than being separated out as it is in ones experience of the world. You could be a resident there and perceive filthy students being sick on your car and the world would seem like that. This web site one hopes will, just by clicking on different points, give more of the full picture of Selly Oak.

K.A. Are you designing the web site or getting people to design it for you?

A.S. I know nothing about web sites, but I think I have a kind of fantasy about what it can do so I'm getting people to design it with me. Three people are involved in the Birmingham one, somebody to set up web sites, someone who will be out in the world getting people to contribute and me who is going to work on the conceptual side.

K.A. There seemed to be a bit of reluctance on your behalf to recognise the role of computer model making in a discussion exploring the process of building *The Open Sea*. Why was this?

A.S. [After a very long pause] Well the first thing, I shall come at it from another angle, the physical and spatial experience of the installation is completely other than the experience of looking at the drawing. Although the drawings are extremely recognisable as a being of and from having the character of the work, so I suppose one could say that all the decisions could have been made by going through modelling techniques and endeavours that we went through. So you might have some or most of the answers there, so why go ahead and do the work?

K.A. You mean why build the object?

A.S. What I'm saying is that you were handling an extremely powerful tool (3D Studio) with which one could make many of the decisions one might have to

go through to produce *The Open Sea*. We can try this wire model here, this height of floor here, this kind of light, and after a while we got close to what I had in my mind. And yet what is missing? I don't know if you agree but the palpable experience of being in that space is completely other than looking at an animation on the screen and yet the two are clearly visually closely linked. I suppose I am protective of the decision-making in actuality because it is hideously hard work and all that is maintaining it is a conviction that the result will be different from the drawing. The better that drawing is, the nearer one is to saying let's just do the drawing and not bother with making it.

K.A. That is interesting because when I wrote about it in my diary at the time I did pose the question myself. If I could have built it as a virtual model, was there any point in physically making it. But to me there is a totally different reason to physically build the work relating to sensual experience. There is something annoying about the computer in that it could take away the creative struggle. It can never recreate the real thing but makes a good job at looking realistic.

A.S. I couldn't say that it didn't annoy me that the finished result that came long after the drawings was actually fairly close to the drawings. It did bug me. I also think that one is being lazy I suppose and glib because there is no detail in the drawing, there was a massive amount of detail in the thing itself. The finer decisions were probably decisions that I made during construction, the way one thing connected to another were decisions I had pored over longer than any other.

K.A. I find intriguing that you're so protective about it, because ultimately all it did was provide one viewpoint of what you did and that was it. It would be like saying well now I've seen a picture of you, I don't need to bother meeting you. A computer model can never give you all the realities of life. I find it really intriguing how upset you have become.

A.S. Well I feel it is always easier not to do something than to do it. Somehow one has to crank up one's desires, one's rage, whatever and make oneself do these things. And I also have to expose anything that threatens that momentum to my rage or else it's easier for me not to bother. We could also talk about images, I recognise their emasculating pacifying capacity in so much as they fulfil just sufficient to recognise and understand but they don't have any of the details the physical qualities, the depth.

K.A. It's eye candy as they say in the computer world.

A.S. Oh do they, well indeed, one has to be extremely careful and not over estimate one's ability to resist eye candy.

K.A. Has your attitude to the use or effects of using the computer changed over the last three years?

A.S. Well I've suddenly become very interested in email and the net which I hadn't been before.

K.A. That seems a natural progression from your interest in administration in some ways.

A.S. Yes it's the same thing, the arrangement of folders which I found liberating, I hope will be as liberating for contributors to the web site.

K.A. Why I asked you that was to do with the problem of the computer models of the *C-bin Project* sculptures. I could not make them look old and you said you went to ask some 3D Studio expert whether they could do any more to make it look better and they said well your using the wrong medium.

A.S. Yes they knew immediately this was not what computer modelling was good for, and I suppose I found that rather satisfying both to see that you had failed, and also that it was current currency.

K.A. Well I was relieved that it was not put down to my abilities using the program.

A.S. We wanted something from you that would look important and actually it looked trite and silly and more boring than the photograph.

K.A. Over the last three years the expectations I had before I knew what the software could do have changed.

A.S. I wonder if whether I think things aren't just as clean as those sea bins, whether I can imagine bubbling rust. I'm thinking the space in *The Open Sea* was just as I had imagined it and the effect of the passing of time is hard to imagine, let alone someone using a software package to create it. What we learnt with the *C-bin Project* was that what ever was depicted by the computer looked brand spanking new. *The Open Sea* computer model was meant to depict a metallic, brand new space in which rather tired lumpy, badly dressed bodies shifted around. We never tried to draw those figures if we had tried to put figures in we'd have been in trouble. I remember saying can we do this.

K.A. Instead I made sure all the shots of the model were taken from eye viewpoint so you could imagine you were looking at the installation. I don't like putting people in the model, as they never look real.

A.S. There was to be a very marked contrast between the organisms in the physical installation and the way the space was orchestrated. If we had drawn the

figures in the computer model we'd have had no contrast at all, or they would have been of the same stuff as the things they were coming into contact with.

K.A. Have you ever built anything with a 3D modelling package? Would you ever consider using a modelling package?

A.S. I have a 3D modelling package but I couldn't work out how to use it.

K.A. You need the manual you can't learn them without. In *The Open Sea* you wished to create unique views of the space, control the viewer's viewpoint and the objects suspended in that space, did the computer model aid the realisation of this?

A.S. No. The reason it didn't was that in order to make the computer model I had to know what it would be like so I could tell you what I wanted.

K.A. Where do you equate the role of computers in sculptural practice? Do you see the computer as a tool, material or an ideology?

A.S. You're not interested in asking me about it as a design tool; you want it as a thing itself. Clearly it's a tool, is it an ideology? You'd have to tell me what you mean by ideology, my first thought is its not. Obviously it's a material, it's hardware has a certain set of characteristics and presences in space, its' interface, screen or whatever method is matter of some kind. You mean I make something out of the computer or I make something in the computer.

K.A. The nature of computers the 'computerness' do you see it as having an identity that effects the way you think about something like the way you think bronze does, in sculptural practice could you have that relationship with it.

A.S. Well I'm very familiar with this question in terms of video and sculptural practice. If one is simply considering video and not sculptural practice one is usually ignoring the hardware, the context, the relationship between the hardware, the screen and the audience, one is accepting all the conventions of video making. Whereas for a sculptor these relationships may have equal relevance to the sequence of events on the screen and I would imagine that one would be operating on the same kind of rigour when thinking about the computer in sculptural practice. Just as in the elements of video making I would imagine computers would make for very interesting set of ingredients.

K.A. What about the image as a material?

A.S. As a sculptor even a photographic image is a material and one has to take into account the film, the fragmentation of the image into little crystals of silver etc.

K.A. So you would count the computer files as material?

A.S. Yes I am, say I count the pixelation as material, the light and the frame.

K.A. Has the computer altered you notion of space?

A.S. Yes it has, if one takes writing like Stanislaw Lem, kinds of compressions of space, the interweaving of macro and micro are happening all the time. The notions have been out there for a while and here we see we can actually operate them. It is stimulating to be able to play around with that idea.

K.A. Do you see the division between digital art and fine art disappearing?

A.S. I think at least modern fine art operates on frictions as much as anything else and there is a constant putting things in context that cause friction. We stimulate thought because they are not the usual contexts we expect to see these things. Looking at digital art one is seeing what one expects to see digital art work but there isn't quite the same friction there. If there was suddenly some human in the digital world then there would be some friction but what one always sees are digital things so somehow for me it doesn't have quite the same excitement. I also think about the hologram that was so fashionable this was going to be the next great art form. In the end what one was impressed by was the technology first before experiencing the work and I never saw a work that overcame this and one waits to see if this will happen with digital art.

K.A. Maybe it has more chance in happening because the computer is so ubiquitous. Also perhaps you have to understand the language of the computer. If there is friction in art it is because you understand the language where something is articulated in a rather different way. If you understand the language of a digital world and something is altered it may have the potential to create friction?

A.S. Maybe I don't understand the language well enough but my kids will.

K.A. What is your opinion of immersive VR for sculptors?

A.S. I don't know how good it is. I've had a go at the Trocadero VR booth, shooting trying to avoid being lifted up by giant birds, but the equipment was too cumbersome. I'm far more interested in the body, our sensory equipment, what we feel and think in our day to day lives. My approach to sculpture is that I will do anything if and in the pursuit of the work it seems to point in that direction.

Appendix H

Interview Transcript: Jackie Hatfield, 3 May 1999

I had met Jackie as a fellow exhibitor in Gamut part of CADE99 Conference on Computers in Art and Design Education, held at the University of Teeside 7-9 April 1999, www.tees.ac.uk/cade99/intro2.html. The interview was conducted via email.

K.A. What kind of media did you employ before you began to use computers in your work?

J.H. I used performance and video installation and single screen, and before that clay/plaster/moulds/paint.

K.A. What made you choose to use computers in your work?

J.H. The potential for including the audience in a tactile experience. The notion of putting the audience in an active relationship with the artwork. Encouraging the audience to be tactile, and to effect a change in the work. To be messy with equipment - which is part of the process of making a work (for me) similar to sculpture that is very physical.

K.A. What has been the implication of introducing computers to your sculptural practice?

J.H. Similar to above.

K.A. How do you deal with the viewer/computer/object interface?

J.H. How do you mean, deal with? Do you mean what programming do I use? Or how do I determine the objective? Can you clarify the question please.

K.A. What is your opinion of the debate between programming and software? Should artists learn programming to gain true control and creativity, or do you see software as a liberating tool allowing artists to concentrate on the ideas rather than get bogged down with programming.

J.H. In my current paper *Disappearing Digitally* I question the hyperbole around computers as 'Revolutionary' technology that will empower - my argument is based around programming and gender, and the dearth of maths-oriented education for women and girls. The problem I have with the notion of

software being empowering in anyway is that it already has set pre-authored parameters so the real author has to be the coder. Most users don't want to 'get inside' the computer (many creative practitioners prefer to use macs) and PC users have the reputation of being 'nerdy' because they take the machine apart. Actually I think that this is an important aspect of my own work, that I take the machine apart and the code - I want to make the machine work within my own parameters.

K.A. Have you worked with collaborators to make work, if so how have they influenced your practice?

J.H. I have people do crewing for the productions, and have help with coding and making the systems work. I'll answer the other questions later, as have to dash but I'd be interested what you think re coding etc, and the questions you've posed. Later Jackie.

The following are the remaining unanswered questions:

K.A. Is the mixing of digital imagery with real objects possible or doomed to an unsatisfactory union, a halfway point between total immersion?

K.A. Do you feel there is still a place for shows and conferences devoted to solely digital work, or do you think computers are integrated enough into art practice to be seen as just another medium?

K.A. How does the computer alter your notion of space?

Appendix I

Case Study 1: Have Your Cake and Eat It

DATE November 1996

VENUE Wolverhampton University

OUTCOME OF ARTWORK

Installation performance. Animated computer model image of cake projected on wall; cake spins round as if on cake stand. On one table in front of digital cake, a real baked cake is on a display stand. On another table six places are laid for tea.

MATERIALS

3D Studio software, computer, data projector, mixed fruit, eggs, flour, butter, icing sugar, glace cherries, two tables, tablecloth, six chairs, paper plates and napkins, video camera, tripod and monitor.

PROCESS

Posters and invites were sent inviting all to partake in Liminal Tea Party. People came and ate cake all afternoon while viewing the projected virtual cake spinning and discussed wide ranging topics from realness and remnants to cake recipes. The whole party was recorded on video and shown on a monitor during the event.

Case Study 1 Have Your Cake and Eat It (version 2)

DATE July 1997

VENUE *Consciousness Reframed* conference, Centre for the Advanced Inquiry in the Interactive Arts, University of Wales, Newport.

OUTCOME OF ARTWORK

Interactive/performance. Animated VRML model of cake projected on wall inside digital cake are animated tongues with big black hairs stuck to them. On a table in front of projected digital image a real baked cake. In front of this cake was a computer mouse and one chair.

MATERIALS

3D Studio software with plugin to export to VRML, data projector, computer, mixed fruit, eggs, flour, butter, icing sugar, glace cherries, one table, tablecloth, one chair, paper plates and napkins.

PROCESS

Held as part of the conference dinner, guests were asked to sample the cake by using the mouse to move the VRML cake around and see the internal animations and/or eat the real cake.

6

Author: Kate Allen

Title: Having your Cake and Eating it

Keywords: lowcalorie, virtualcake, liminal, realiteaparty

Ingredients

Take one sculptor

Dream of ideal cake, mix of fairy tales and special occasions

Add low level tsp. of computer knowledge

One copy of Autodesk 3d Studio software, build 'perfect' cake

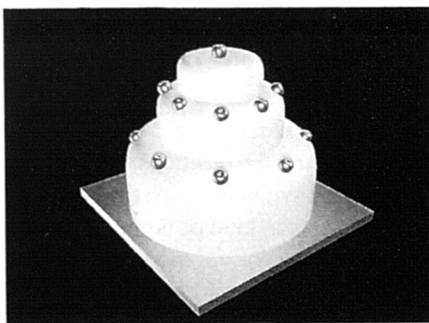
Combine eggs, flour, butter and sugar, dried fruit, baking powder and icing sugar, then bake

Add questions concerning reality, reproduction, imagination and virtuality

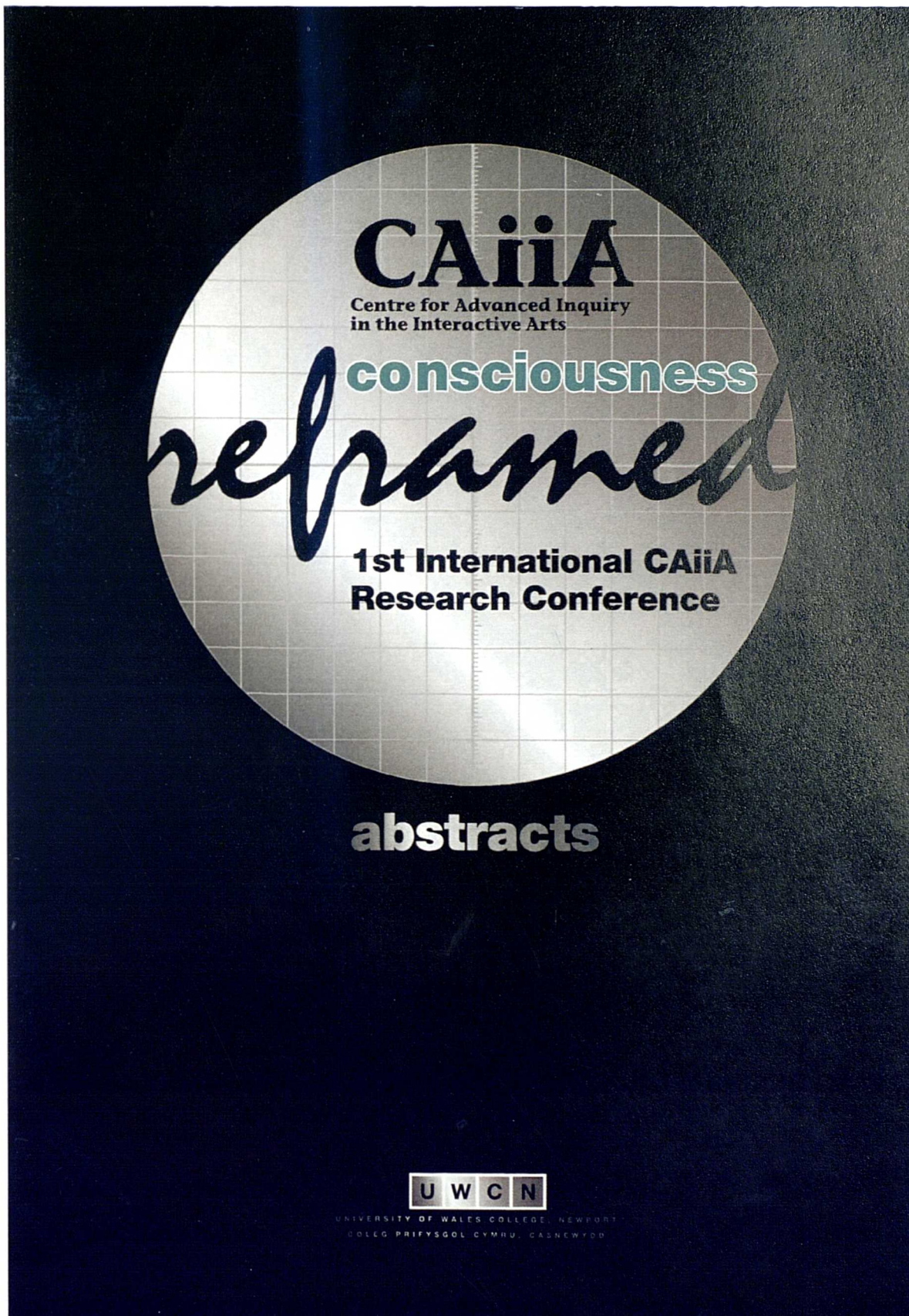
Attempt to blend together

Invite all to liminal tea party

Eat, digest, regurgitate?



Case Study 1: Have Your Cake and Eat It, CAiiA Abstracts booklet, p6.



Case Study 1: *Have Your Cake and Eat It*, CAiiA Abstracts booklet, front cover.

Appendix J

Case Study 2: Safety Net

DATE 28 February 1998

VENUE *Safe Zone* Event, West Bromwich Town Hall

OUTCOME OF ARTWORK

Interactive installation. VRML model incorporated into Director animation of a safety net with objects suspended in it, projected on a wall. In front of the projection a real net was strung across the room with the same objects created as PVC plastic soft objects in net and around a gym fall mat. Behind this was a padded plinth with a computer mouse.

MATERIALS

3D Studio and Director software, computer, data projector, PVC plastic, polystyrene stuffing, fall mat, safety net.

PROCESS

Acting as an information point the projected digital objects held in the safety net represented and linked to 10 different community projects. Pointing with the mouse the audience could access these projects while other viewers could lounge on the same objects created in PVC plastic and watch projected images of the projects.

Appendix K

Case Study 3: Exorcising the Flesh

DATE 17 September – 31 October 1998

VENUE Walsall Museum and Art Gallery

OUTCOME OF ARTWORK

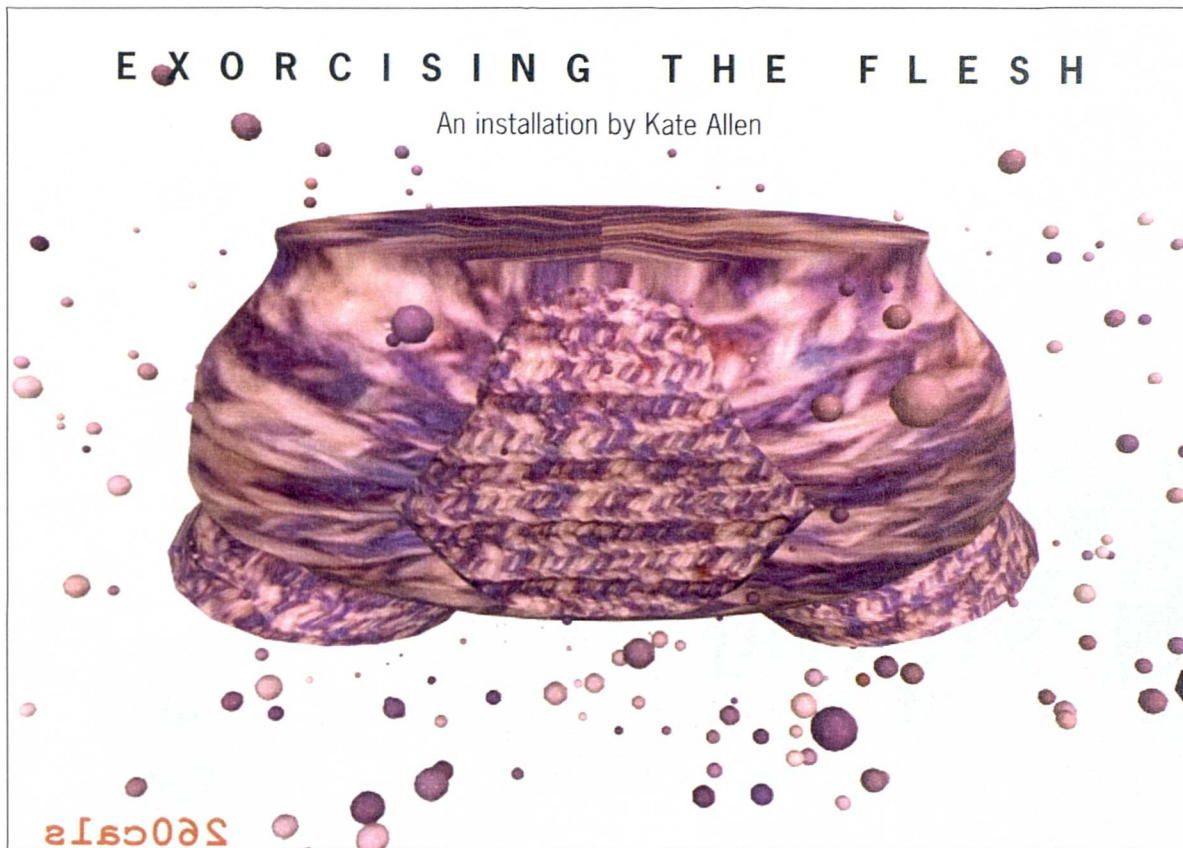
Interactive installation. Installed gym like interior, wooden floor, mirror wall and back projection screen wall and speakers which played constantly 1980s exercise records. The installation consisted of two pieces: *Exorcising the Flesh* consisted of a computer mouse linked to a running machine via the mouse ball touching the flywheel of the running machine. The computer and projector are hidden in space behind the back projection wall. 3D Studio animations are projected through the back projection screen and reflected on the mirror on the opposite side of the room, which the running machine faces. *Fat-Free Fat* was on the other side of the room and consisted of a computer and monitor and vanilla essence hidden inside a wooden box. The box exterior is padded in PVC plastic and roll-on deodorants are set into the soft padded exterior. A track ball mouse, linking the viewer to the VRML model on the computer monitor, is attached to the exterior of *Fat-Free Fat* and above the track ball of the mouse is a small viewing hole. In front of *Fat-Free Fat* is a pouf on wheels covered with the same PVC material. A VRML model of a pink blancmange with animated tongue and cherries inside could be manipulated by the viewer moving the trackball mouse.

MATERIALS

3D Studio/VRML software, 2 computers, 1 data projector, tape player and speakers, running machine, 1 computer monitor, 2 computer mice, mirror, wood floor covering, PVC plastic, foam, wood, vanilla essence, roll-on deodorants, tape of a collection of exercise music taken from LPs of the 1980s.

PROCESS

In *Exorcising the Flesh* the viewer went on the running machine, depending on how fast they ran animations would be triggered and projected through the back projection wall and reflected on the mirror in front of them. In *Fat-Free Fat* the viewer would sit on the pouf and view a VRML model by peering through the eyehole, the whole of the blancmange could only be experienced by move the trackball mouse around which moved the model. The viewer would smell various scents from vanilla to deodorant.



Case Study 3: *Exorcising the Flesh*, Private-view invitation card.

THE OTHER SPACE

Walsall Museum and Art Gallery
17th September - 31st October 1998

Notes on the creation of *Exorcising the Flesh*

I decided to use a computer in response to encountering a series of problems in my sculptural practice, rather than from an interest in the machines themselves. I had been building a series of works which concentrated on notions of the power of the mind over the body, exploring the influence of media representations of the body and its relation to self esteem. I was interested in examining the physical and mental space our bodies occupy. This preoccupation with notions of spatial containment led me to want to make a piece of work which was built from the calories and flesh that had been discarded through dieting. As I pondered over how to best represent a lack or loss of a physical substance and how to construct a piece of sculpture that was built out of 'nothing', the computer seemed the obvious tool. Obvious, because the computer reduces everything, (images, 3D objects, sounds, words), to a series of numbers, or, as I imagined it, vital statistics. Conversely, from those numbers, simulations are created which I am willing to believe are 'real'.

I consider the computer as being a tool of mass media manipulation; a cultural tool. I continue to explore this notion and to use computer imagery to extend my sculptural practice. The newness and instantly recognisable nature of computer imagery can make the viewer aware of the 'virtualness' of digital objects. These objects become, in the mind's eye, as infinitely flexible and controllable as in the imagination. The fact that they consist of no matter, paradoxically draws attention to our awareness of the physical.

Kate Allen
Artist

Kate Allen would like to thank Ravinder Basra, Wolverhampton University and Liam Birtles (NVRCAD), Coventry University, for all their technical support.

Inside all our heads lives a virtual image of ourselves; - the person that we'd like to be, informed by media hype and particular concepts of beauty and perfection. Living alongside however is a ghoulish virtual vision of ourselves on a bad day; - mutilated, ugly and with a few extra pounds to bear. While some of us can handle our virtual friends (and enemies) and keep the nagging fear of rejection at bay, for others, self-obsession and lack of confidence can transform the skinny, underweight body into a virtual vision of obesity, resulting in the frightening modern phenomena of eating disorders such as anorexia or bulimia. The real and the virtual have become dangerously intertwined.

Kate Allen has long been fascinated with our relationships with our bodies and the pressures posed to shape and manipulate them towards a concept of supposed perfection. Her earlier works on this theme were essentially sculptural though alluding to the virtual and were usually interactive, inviting the viewer to actively participate in the experience. More recently, she has benefitted from undertaking postgraduate research at Wolverhampton University into the world of virtual sculpture. The computer has provided a whole new stage on which to explore the virtual world of fantasy and failure.

In Kate's new installation, created especially for Walsall Museum and Art Gallery, the viewer, once again, is invited to assume an active role, and it is the viewer who triggers activity within the space. To create her computer animations, Kate has used 3DStudioMAX, a software programme designed for use in the computer games industry, in association with VRML (Virtual Reality Modelling Language). This allows the viewer to move the object on screen rather than passively watching.

Half of the room resembles a gym or a dance studio with its wooden floors and mirrored walls. This is a place where we are all too aware of the way in which we represent our bodies to ourselves as we attempt to burn calories on the treadmill. The other half of the space seems more suited to the couch potato with its sculptural soft furnishings. Through the viewer's interaction, computer animations pervade the space. A bouncing girdle appears. Other animations, suggestive of body parts, yet strangely grotesque, occupy the space in which we stand. Back projected from an unseen source, they escape the confinement of the computer screen and dance and play on the surface of the mirror, that virtual world with which we are all familiar.

An element of humour and absurdity is integral to the work, reflecting the absurdity of our attempts to control and transform our bodies. We live in a society that has created fat free fat, creams to prevent ageing and pills to make you lose weight....

What is real and what is virtual in the modern world becomes less easily defined.

Deborah Robinson
Senior Exhibitions Officer
Walsall Museum and Art Gallery

We are grateful to Wolverhampton University for their assistance in realising this project.



INSTALLATION Site/Exorcising the Flesh ►

Like the Serpentine Gallery in London, which continued to mount installations throughout its recent renovation, the Walsall Museum and Art Gallery is staging exhibitions while the New Art Gallery is being constructed across town.

Half of the old gallery is given over to Site, a display of artistic responses to the process of regeneration taking place at the new gallery. The works, from artists such as Richard Wentworth and Ming de Nasty, are occasionally pretentious, but mostly pensive studies providing a conceptual diary of the building work.

Elsewhere in the gallery, artist Kate Allen is displaying the unnerving installation *Exorcising the Flesh*, which studies our obsession with health and beauty through computer-generated images coloured in garish pinks and blues. But for those more interested in cranes than canvases, the

building site itself is open to the public this afternoon between 1pm and 4pm, to give you a glimpse of the new galleries that will open this time next year.

Walsall Museum and Art Gallery, Uchfield Street, Walsall
(01922 653 116), until November 1



BLOOMIN' MARVELOUS:
Part of Kate Allen's
installation, *Exorcising
The Flesh*

Case Study 3: *Exorcising the Flesh* Review, *The Times Metro*, 19-25 September 1998.

Walsall Express & Star

Friday, September 18, 1998

An art warming to purple pants . . .

By Andrew Toft

David Bowie, Janet Street Porter and several government ministers have been invited to two new Walsall art exhibitions featuring a pair of virtual purple underpants, a globule of inflatable fat and 3-D images of the town's new gallery.

The exhibitions, Site, and Kate Allen's Exorcising the Flesh, were unveiled at a launch party last night. Gallery staff invited government officials and celebrity art enthusiasts in a bid to give the exhibitions the national and international recognition they believe they deserve.

In Exorcising the Flesh, visitors can use a treadmill to change computer generated images of body parts on a screen behind them which they view through a mirror.

The images change according to the amount of calories burned off and 260 calories brings up a pair of giant purple knickers.

Also featured in the exhibition, designed to reflect the absurdity of attempts to control and transform our bodies, is an inflatable globule of fat with a tiny television screen projecting images of cream cakes.

On a more serious note the Site exhibition charts the construction of the new art gallery with photographs of workers and the building itself.

A wooden model of the gallery, by Sean Dower, allows visitors to peer in and see 3-D 'stereoscopic' photographs of the interior under construction.

Claire McDade, the gallery's audience development officer said: "We are trying to make a big splash with these exhibitions both nationally and internationally."

"We should be appreciated as much as any art gallery down south, people tend to dismiss anything outside London."

"Site is the first exhibition we have had to do with the new art gallery."

"It's a year until it opens and we want this to be a celebration of the work that is going on there."

Case Study 3: Exorcising the Flesh Review, Walsall Express & Star, 18 September 1998.

Walsall Express & Star

01 902 313131 Wednesday, September 23, 1998 Price 30p

Breathing in short purple pants



Worth a second look? Audience development officer Claire McDade takes to the treadmill as part of the interactive *Exorcising the Flesh* exhibition at Walsall Art Gallery

A pair of virtual purple pants is taking centre stage at Walsall Art Gallery, as it becomes an unlikely venue for those wanting to burn off a few calories.

Media celebrities and politicians have been invited to the exhibitions *Site* and *Kate Allen's Exorcising the Flesh*.

In *Exorcising the Flesh* visitors can use a treadmill to change computer-generated images of body parts on a screen behind them which they view through a mirror.

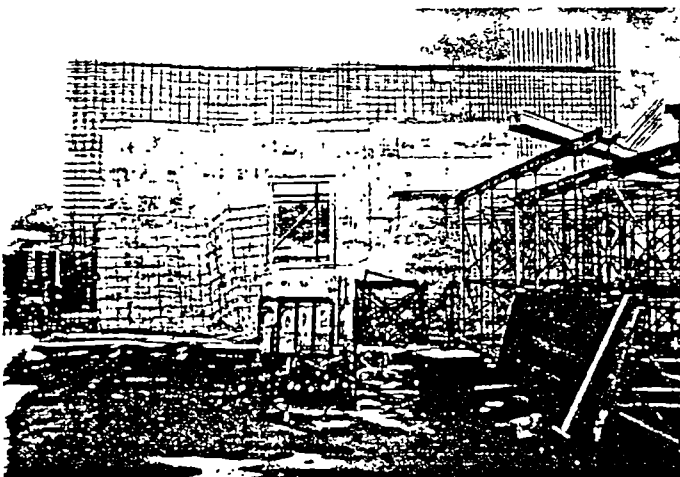
The images change according to the amount of calories burned off and 260 calories brings up a pair of giant purple knickers.

The *Site* exhibition charts the construction of the new art gallery at Town Wharf - due to open in 12 months time - with photographs of workers and the building. A globule of inflatable fat coupled with 3-D images of the town's new art gallery are also on show in the two-headed exhibition which runs until the end of next month.

Case Study 3: *Exorcising the Flesh* Review, Walsall Express & Star, 23 September 1998.



visual arts



Walsall Museum & Art Gallery

Lichfield St, Walsall. Tue-Sat 10am-5pm, Sun 2pm-5pm. 01922 653 116

Thu Sept 17-Sun Nov 1:

Site/Exorcising The Flesh. See preview

Site/Exorcising The Flesh

A year from now, Walsall's much mooted New Gallery will (hopefully) be open to the public. The actual building itself is arguably as important as the collection housed within, and just to prove this point, *Site* celebrates the entire project with a series of artistic responses. Local lad Sean Dower has produced a sculptural work that includes stereoscopic photographs of the interior under construction. Like Dower, Alex Harvey is also concerned with scale, while Corrado Morgana's cinematic credit sequence has been inspired by the Garman Ryan Collection. Catherine Yass has taken images from digital film sequences that will be projected onto the New Gallery's giant Window Box screen. Photographers Helene Binet, Gary Kirkham, and Ming de Nasty touch on the physicality of the new building and the skills of those constructing the gallery, leaving Anne Parouty and Mark Ball to produce the now obligatory website. Seems like the only thing missing from this venture is a good song or epic poem. *The Ballad of Walsall Gallery* anyone?

Meanwhile Kate Allen utilises software used in the computer games industry to create an interactive installation for *The Other Space*. Bouncing between the wooden floors of the gym, and the soft furnishings of the home, *Exorcising The Flesh* is concerned with how we perceive ourselves, our desires to appear slim and trim, and the dangers this can have as self obsession and low self esteem turn average into obese. Walsall Museum and Art Gallery

Thur Sept 17-Sun Nov 1, DF

Case Study 3: Exorcising the Flesh Review, What's On, 5-18 September 1998.

Appendix L

Case Study 4: Visualisation for Andrew Sabin, *The Open Sea*

DATE December 1996-March 1997

VENUE Preliminary drawings and private view card for Henry Moore Studio, Dean Clough, Halifax

OUTCOME OF ARTWORK

Visualisation printouts. 3D Studio computer-model visualisation for Andrew Sabin's installation *The Open Sea*. Images from the computer model were used by Andrew as preliminary drawings for the Henry Moore Studio and were also used for his private view cards.

MATERIALS

Printed output from 3D Studio, Computer.

PROCESS

Through a series of conversations Andrew described the installation *The Open Sea* which I modelled in 3D Studio on the computers at Wolverhampton University (at this point I did not own my own computer). I would then send Andrew the print outs and we would discuss changes. Andrew was very keen to sit beside me while I worked on the model we tried to install the 3D Studio model files onto computers at Middlesex University, London. After several frustrating attempts where we never managed to get the files to work, probably due to incompatibility of systems, we gave up. I continued to work on the model alone on the computer at Wolverhampton University and we developed the model by phone discussions.

Appendix M

Case Study 5: Performance

DATES 7 April 1999, 27 November 1999, 31 January 2000, 17 March 2000

VENUES *Lara Croft* presented as part of *Gamut* an exhibition to accompany CADE99 conference, Cleveland Gallery, University of Teeside, *Catherine Real* Wying Art Gallery, Cambridge, *Little Death* White Cube Gallery, University of Bath, *Little Death* Lecture Theatre, Goldsmiths University

OUTCOME OF ARTWORK

Series of performances. I performed with a dummy of *Tomb Raider* character Lara Croft. The dummy was built wearing a white long dress with a rollerball mouse set in to her lap, this is linked to a computer which moved VRML models projected on to the dummy. The VRML models were changed depending on the venue, as was the title of the performance.

MATERIALS

3D Studio/VRML software, computer, data projector, rollerball mouse, soundtrack, dummy in long white dress, sitting platform.

PROCESS

I would try to build the sitting platform as high as the venue would allow so the long dress of the dummy would spread creating an altar or monument look. I would have the dummy in my lap and insert my arm into the sleeve of it's dress through an opening at the back shoulder. This created a sort of ventriloquist-like control of her arm so I could move the mouse set in the dummy's lap. I tried to keep as still, serious and quiet as possible becoming dummy-like myself. I would put a mirror or have a video monitor in front of me so I could see a reflection of the projected VRML model on the dress of the dummy. This meant I could control the VRML model as the sound track directed. The sound track was on a loop directing to move left a bit right a bit etc; I would move the VRML model accordingly via the rollerball mouse.

Magma's Webmail: Reading

<http://mail.wlv.ac.uk/cgi-bin/webmail/webmail>MAGMA
WebMail™

Trash (2036Kb)

TRANSFER

INBOX

REPLY

FORWARD

FRAMES MODE

X DELETE

Date: Mon, 19 Apr 1999 11:20:32 +0000
 From: Colin Beardon
 Subject: Re: Gamut/Performance
 Cc:

Kate,

I thought it a delightful piece. Perhaps my experience was coloured by the fact that I had seen your presentation of the 'VRML-cake' at the NVRCAD workshop so I was immediately wondering where I had seen this before. It sparked all sorts of ideas in my head - like, would it be possible to have an input device based on a wooden spoon in a mixing bowl, ... etc.

This piece was, however, not primarily about this vrml model but, for me, was about the difficulties of manipulating digital interfaces and the 'tackiness' of interfacing with respect to the promises of 'immersense' - thus I saw it as a continuation of your concerns with the unpolished 'underside' of things. It is probably not what you intended but that is what I got!

As you can tell, I liked it but I felt it was a little bit of a pity that it was presented at the initial 'get-together' where people were naturally pre-occupied with meeting old friends.

Nice piece, though, and I still think your vrml-cake is wonderful!

- Colin

K.Allen wrote:

> Hello Colin
 > Please could you write a few lines on your impressions of the performance piece on the opening night of Gamut. If you know of anyone else who saw it could you pass this message on. As you can imagine I didn't get to discuss it with everyone on the night!
 > Thanks very much
 > Kate

--

+++++
 Professor Colin Beardon Exeter School of Arts & Design
 University of Plymouth Tel (+44) 01392 475028
 Earl Richards Road North Fax (+44) 01392 475012
 Exeter EX2 6AS, UK Email: c.beardon@plym.ac.uk

1 of 1

19/04/99 12:38

Case Study 5: Performance E-mail correspondence from Professor Colin Beardon, Exeter School of Arts & Design, 19 April 1999.

Magma's Webmail: Reading

Page 1 of 1



Trash (2036Kb)

TRANSFER

INBOX REPLY FORWARD

FRAMES MODE DELETE

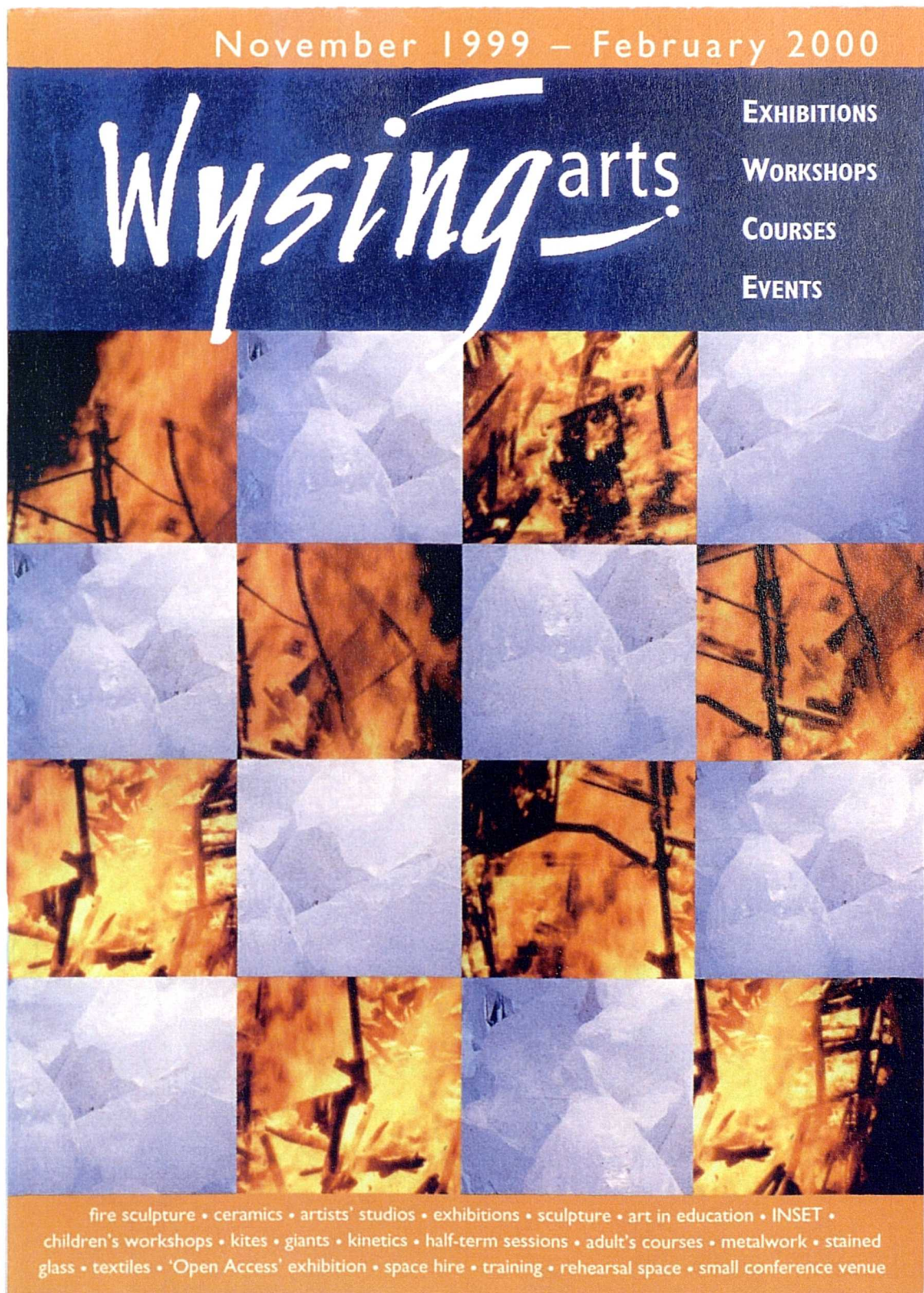
Date: Tue, 20 Apr 1999 14:59:28 +0100 (BST)
From: Jackie Hatfield
Subject: Re: Hello from Kate (asking favours)
Cc:

Hi Kate, Im sorry I havent replied sooner, but have just got back to office after Easter. I thought that your performance was very good. ie the actual performance, and you particularly. The notion of woman touching 'woman' or Lara anyway, I found very interesting and fitted into current issues around gender and sexuality. I wonder who got the comedy of the piece, because I found it quite funny and wanted to laugh, the notion of the blancmange being a metaphor for the clitoris, or anyway the cream cake and cherries; - and that you were very serious whilst you were trying to attain the goal for Lara - I liked the piece very much. Anyway, hope to talk soon; ask me more questions if you like about your piece, would be happy to talk with you later
jackie

<http://mail.wlv.ac.uk/cgi-bin/webmail/webmail>

4/20/99

*Case Study 5: Performance E-mail correspondence from Jackie Hatfield,
20 April 1999.*



Case Study 5: Performance Wysing Arts programme, November 1999 - February 2000, front cover.

Exhibitions & Events

Visitors are welcome to visit the site throughout the year. Notice boards will direct you to outdoor sculpture and landmarks.

'Fire in the Fields'

Saturday 27 November 5.00pm – 7.30pm

The theme for this year's annual event will be 'fire and ice'. The evening will include the burning of a giant kinetic sculpture made from over 1000 pallets including sound, projected images and performance. The Wysing site will be open from 5.00pm for viewing the illuminated sculpture before the burning. You can also see 'Catherine Real' and 'Animated Objects', and explore the site and artists' studios. The burning will start at 6.30pm(prompt) which will include a short introduction by the Saturday Performance Group.

'Animated Objects' – projection and sculpture

From 5.00pm – at the Fire Sculpture site
'Animated Objects' is a collaborative work made by children aged 7-16 and a team of artists during a series of October half-term workshops at Wysing Arts. The 'Animated Objects' are inspired by the Snow Queen legend.

Saturday Performance Project

This group of 7 performers meet on Saturday afternoons at Wysing Arts and work with theatre practitioner Rachel Aspinwall. The short piece at the 'Fire in the Fields' event, based on scenes from the Snow Queen legend, it also includes sculptural elements made by the group.

Cost – Adults £1, children 16 and under 50p, children under 7 free – please wear warm clothes and bring a torch! Profits will be used towards the costs of site improvements for wheelchair users.

'Catherine Real' – performance

From 5.00pm – 6.30pm in the gallery.

Part of a series of performances by artist in residence, Kate Allen, exploring the relationship between objects/body and computer images.

'Catherine Real' contains a range of elements:- Computer, Model, Dummy, Image, Perfect, Sainly, Sex-symbol, Normal, Repetitive, Messy, Explosive. Interaction, occurs through a dummy of perfect woman.

"With her on my lap I let her take over, I become part of the material, there is no communication, we are on display".

Refreshments will be available throughout the evening.

*Case Study 5: Performance Wysing Arts programme, November 1999
- February 2000, inside detail.*

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